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THE Wonders OF THE ANIMAL KINGDOM,

EXHIBITING

Delineations of the most distinguished WILD ANIMALS,

IN THE VARIOUS MENAGERIES OF THIS COUNTRY

Tiger, head drawn by [illegible]

London:

PUBLISHED BY THOMAS KELLY, PATERNOSTER ROW

1829.

THE

WONDERS OF THE ANIMAL KINGDOM;

EXHIBITING

DELINEATIONS OF THE MOST DISTINGUISHED

Wild Animals,

IN THE VARIOUS MENAGERIES OF THIS COUNTRY;

ACCOMPANIED BY A

CONCISE DESCRIPTION OF THE NATURAL HISTORY OF EACH ANIMAL, IN ITS SAVAGE OR DOMESTICATED STATE;

INCLUDING

CURIOUS AND INTERESTING ANECDOTES AND FACTS,

CHARACTERISTIC OF ITS PECULIAR HABITS,

COLLECTED FROM ORIGINAL INFORMATION.

O Lord, how manifold are thy works! in wisdom thou hast made them all: the earth is full of thy riches.

PSALM CIV. 24.

BY

ROBERT HUISH,

AUTHOR OF THE TREATISE ON "THE NATURE AND MANAGEMENT OF BEES;" "LIFE OF THE PRINCESS CHARLOTTE," "MEMOIRS OF GEORGE III." "GEORGE IV."

&c. &c. &c.

LONDON:

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INTRODUCTION.

The mind of man is ever active in the pursuit of useful knowledge; his all-pervading intelligence extracts from every object which surrounds him some fresh source of profit or rational delight; and impelled by a love of science, he explores the natural resources of other countries, with the laudable and patriotic design of enriching his own: but of all the branches of useful knowledge, there is scarcely one which is more beneficial to the human race, or which is more essential to their happiness, than that which treats of the Animal Kingdom. It is a study which instils into the mind the most profound reflections arising from the discovery of the great and admirable harmonies of the world, leading it, as it were, imperceptibly to the fountain of eternal truth, and thence to the knowledge of the Great Creator. It must not, however, be considered as one of mere common amusement; nor ought it to be classed amongst those occupations, which serve as a relaxation from the busy pursuits of social life;—but it should be regarded as the basis of agriculture, of rural and domestic economy; considering that the majority of its productions are not only the sources, but also the nurses of commerce and civilization, from which we derive almost all the enjoyments of our existence.

The knowledge of the Animal Kingdom is, in a moral point of view, attended with the most inestimable advantages to the rising generation. It is the foundation of the purest religion, of the most genuine philanthropy; benevolence, charity, and affection, can never be wholly absent from that breast which has acquired an intimate acquaintance with the operations and the works of Nature. The mind becomes immediately expanded, and, as it were, sublimed by the contemplation of those stupendous and wonderful creatures which even a limited research into the Animal Kingdom affords it. From the contemplation of a floating atom, it proceeds through all the gradations of animated life, until the astonished mind rests at last at the throne of that Being, who laid the foundations of the earth, and who gave to the heavens their glory and their splendor. It is in the domain of nature, that the human mind feels itself in its proper sphere; the view is then no longer confined within the precincts of our social dwellings,—it takes a wider and more expansive range, at every step of which, some transcendent beauty, some great and important truth bursts upon it. The mind becomes purified and exalted; it treads the very vestibule of the Godhead, and drinks at the fountain of eternal truth the inspiring sentiments of religion and of love.

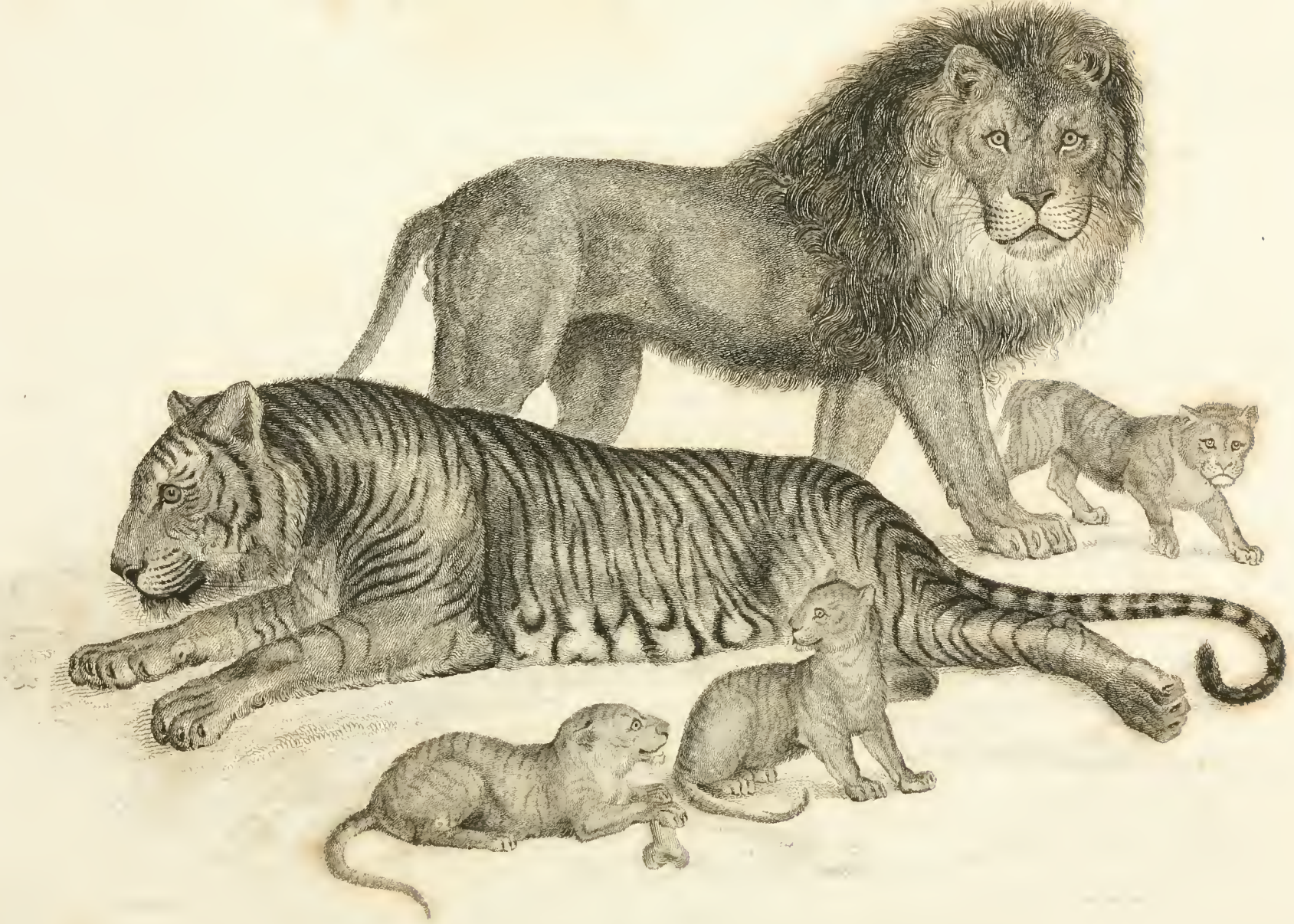
If we consider the study of nature in a religious point of view, how pleasingly are we drawn by a contemplation of the wonderful creatures which inhabit the earth to the

reverence and worship of that Being, who, in the words of the inspired Psalmist, has said, "*My voice is heard in the roar of the lion, and in the murmur of the insect am I made manifest.*" The splendor of all earthly monarchs is eclipsed by that of the humblest flower; the very dust which is scattered by the winds reveals to us the existence of an Omnipotent Being. If we survey the illimitable vault of heaven; if we examine the flowers which decorate the earth, the birds which traverse the air, the beasts which prowl the desert, the monsters which inhabit the deep, how grand and sublime are then the feelings of our hearts? In meditating and contemplating those objects, the human soul is transported to the adoration of the Infinite, to the source of supreme and everlasting truth; and we thereby become more intimately acquainted with our own nature, with the extent of our own duties, with our own condition, and the means which a benevolent and gracious God has given us for augmenting our general and individual happiness.

Various and dissimilar as may be the modes of education by which the mind of man is led to the knowledge of truth, and thence to the adoration and reverence of an Eternal and Omnipotent Being, it is impossible to select one more capable of producing that desirable end than an intimate acquaintance with the history of those wonderful objects, which in every quarter of the globe, present themselves to the admiration and contemplation of the exploring naturalist. By a knowledge of their habits, their structure, the astonishing variety of their forms, and the universal and unerring laws by which they are governed, the mind becomes impressed with the idea of Omnipotence, and is thus delightfully led to "*look from Nature up to Nature's God.*"

Having thus briefly expatiated on the advantages and pleasures which are derived from a knowledge of the wonders of creation, we now proceed to state, that the chief aim of the present work is to excite, particularly in the juvenile mind, a taste for the study of natural history; and if we have been fortunate enough at the close of our labours to have accomplished that end, we are confident that we have rendered an essential benefit to society in general. The parent, who wishes to instil into the minds of his children an idea of the omnipotence of God, has only to conduct them to the den of the lion or the elephant; and the children, on reading a description of the nature, character, and habits of those wonderful creatures, cannot fail to be impressed with an awful sense of the unlimited love and obedience which they themselves owe to the Great Father of the Universe, and in the fulness of their wonder and gratitude, exultingly exclaim—

> These are thy glorious works, Parent of good!
> Almighty! thine this universal frame;
> Thus wondrous fair, thyself how wondrous then,
> Unspeakable, who sitt'st above these heavens,
> To us invisible, or dimly seen
> In these thy lowest works; yet these declare
> Thy goodness beyond thought, and power divine.



THE LION, TIGRESS, AND CUBS,

in the Menagerie of Mr. Cross.

THE WONDERS OF THE ANIMAL KINGDOM.

THE LION, TIGRESS, AND CUBS,

IN THE MENAGERY OF Mr. ATKINS.

From the earliest period, naturalists have concurred in considering the Lion the most majestic inhabitant of the Desert. With justice has he been denominated the monarch of the brute creation, the sovereign of the animal kingdom. His majestic gait—his ferocious courage—his unequalled powers of destruction—his magnanimity and gigantic strength, justly entitle him to the investiture of a royal animal, and to hold the first place in rank and importance in the pages of natural history.

It is, however, a subject of congratulation, that the range of this tremendous animal is limited to particular portions of the globe, and that even in those very districts, his species seems to be diminishing. The cause of this diminution is not difficult to be assigned; for, in proportion as human civilization extends itself, the desert becomes peopled, the haunts of the lion and the hyæna are encroached upon, and man, who alone is able to compete with those monsters of the forests, declares an interminable war against them, considering that on the annihilation of their species depend his safety and his existence. In the vast and solitary deserts of Zaara, as yet untrodden by the foot of man, and where the monotony of the scene is alone broken by the roar and yells of the prowling animals, the lion may be said to reign with undisputed power. He possesses no instinctive fear of man, and this is evinced by the undaunted ferocity with which he makes his attack in those districts most remote from human habitations. It is in the recesses of the burning deserts that the lion presents himself in all the ferocity and sanguinary disposition of his nature. He becomes the terror of the surrounding countries in which he makes his predatory incursions; and having satiated himself with his prey, he retires in the consciousness of his unconquerable strength, to repose in his gloomy cave, until hunger again impels him to sally forth, to spring upon the powerless monkey, or the unsuspecting antelope.

It is generally known that the lion and the tiger entertain a violent antipathy for each other; and the circumstance, therefore, of a lion and a tigress cohabiting and producing young in this country is so rare a phenomenon in the natural history of those animals, especially as both of them have, as it were, been bred under the dominion of man, and not in the fastnesses of their native woods, that it has been purposely selected as a subject possessing such an extraordinary degree of interest and novelty, as to render it worthy of occupying the first place in the description of the Wonders of the Animal Kingdom.

The authenticity of the following statement is placed beyond the question of doubt, as it was transmitted purposely for this work by Mr. Atkins, in a letter from Exeter to the Author; and it may be considered as a most curious document, descriptive of a sexual union of two animals, between whom all propagation has been hitherto considered as an abortive experiment.

Mr. Atkins commences by stating that the lion, the sire of the cubs, was bred in his own collection,

from a Barbary lion and a Senegal lioness; and the tigress, their dam, was bred in the Marquess of Hastings' collection of tigers in Calcutta, when he was Governor-General of India.

It appears now, from this preliminary statement, that neither the sire nor the dam was bred in their savage state; and how far that circumstance may have contributed to diminish their natural hostility to each other is a problem not easy of solution; some valid grounds of inference, however, exist, that it might possess some remote influence in facilitating their union, on the principle, that in proportion as an animal, either by education or constraint, digresses from its natural state, it assumes fresh habits, and many of those animosities appear to be modified, which were its distinguishing characteristics in its state of nature. We shall have occasion to enlarge on this topic when we come to treat of the natural history of the different races of lions, which are now in the private and public menageries of this country; for, virtually speaking, the lion of Mr. Atkins is, in every respect, an English animal, and, therefore, cannot be supposed to be characterized by all those ferocious traits, which distinguish the untamed monarch of the woods. The tigress stands nearly in the same relation; it has never associated with its fellows but in a state of domestication, and where the continual power of human control has softened those asperities of temper, which are always displayed in a state of savage nature.

Mr. Atkins proceeds to state that he purchased the tigress of the captain to whom the Marquess of Hastings had presented her, at which time she was eighteen months old; and the young lion being then about the same age, Mr. Atkins conceived the idea of confining them in the same den; not, as he confesses, from any hope of their ever breeding; for he considered that event as scarcely within the range of possibility. However, after a considerable deal of trouble and anxiety, he at last succeeded in effecting the union, and the animals continued to live amicably during a period of two years; when, to his great joy, he discovered that the tigress was with young, and on Wednesday, October the 27th, 1824, she cubbed at Windsor, bringing forth two males and one female: this extraordinary circumstance having been mentioned by the Marquess of Conyngham to his Majesty, the King commanded that the animals should be brought for his inspection to the Royal Cottage, Windsor Park. Mr. Atkins immediately obeyed the command, on the 1st of November; taking with him also the terrier bitch which acted in the capacity of wet nurse to the heterogeneous brood, as the tigress had not evinced any disposition to perform the part of a mother to her family. His Majesty expressed himself highly pleased with this novel exhibition, and asked an infinite number of questions respecting them. After a minute and protracted inspection of this singular addition to the wonders of the animal kingdom, his Majesty gave the name of Lion-Tigers to the cubs: which name has been transmitted to the present progeny, as Mr. Atkins was not fortunate enough to rear any of the first litter, they all dying when about a year old.

The second accouchement of the tigress took place on Clapham Common, April 22d, 1825, but the produce lived a very short time, although in this instance, as well as in the subsequent ones, the tigress took to her young, and suckled them with the greatest fondness imaginable.

The third litter was brought forth at Edinburg, December 31st, 1826, consisting of one male and two females; the former of which died, but the females are still alive, and in perfect health. In form they resemble the lioness, but they have the stripes of the tigress, although not so marked nor dark.

The fourth and last litter was produced at Windsor, October 28th, 1828, consisting of one male and two females; they were all living as late as March 5th, 1829, in perfect health, and Mr. Atkins expresses his anxious hope to rear the male, as he is desirous to know if he will so far partake of the character of his sire as to have a fine and flowing mane.

It is rather a singular coincidence that the last litter was produced exactly four years after the first.

THE OSTRICH.

THE OSTRICH,

PRESENTED BY HIS MAJESTY TO THE LATE MARCHIONESS OF LONDONDERRY AND NOW IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

We consider that we could not select a more appropriate subject wherewith to commence the ornithological department of our work, than the Ostrich. It is distinguished by the general outline and properties of a bird, but it possesses also many distinct characteristics of the quadruped, particularly in its internal formation, and in some respects it may be considered as the link or chain in nature, which separates the animal from the feathered tribes. Like the race of the elephant it has been transmitted down without mixture, and has never been known to breed out of the country which first produced it. The torrid zones of Africa and Arabia are the native haunts of the ostrich, and in those formidable regions they are seen in large flocks, presenting a most curious spectacle to the astonished traveller. The ostrich is a most voracious bird, swallowing almost every thing which is presented to it: grass, hair, iron, stones, leather, all are devoured by it; and Valisnieri informs us that he found the first stomach filled with a quantity of incongruous substances, such as grass, nuts, cords, stones, glass, brass, copper, iron, tin, lead, and wood; and amongst the rest was found a piece of stone that weighed more than a pound. Dr. Shaw relates that he saw an ostrich at Oran which swallowed, without any seeming uneasiness or inconvenience, several leaden bullets thrown on the floor, scorching hot from the mould!

This gigantic bird in general stands so high as to measure from seven to twelve feet from the top of the head to the ground. The individual, from which our drawing is taken, stands eleven feet; from the back, however, it is no more than about five feet, the rest of the height being made up by its extremely long neck. The head is small, and like the greater part of the neck, is covered only with a few scattered hairs. Its strong-jointed legs, which bear a great resemblance to the camel, and its cloven feet, are well adapted both for speed and defence. Of all known animals that make use of their legs in running, the ostrich is by far the swiftest; on observing itself pursued at a distance, it begins to run at first gently, being either insensible of its danger, or certain of effecting its escape. Its wings, like two arms, keep working with a motion correspondent to that of its legs; and its speed, especially if the wind be in its rear, would very soon snatch it from the view of its pursuers, if, instead of going off in a direct line, it did not take its course in circles. Its pursuers then take a smaller circle within, and meet it at unexpected turns, until at last spent with fatigue and famine, after perhaps a chase of two or three days, and finding all hope of escape frustrated, it endeavours to hide itself from its enemies in the first thicket which it can reach, or it covers its head in the sand.

The ostrich is a polygamous bird, the male appropriating to himself two or three and sometimes five females. The season for laying depends on the climate where the bird is bred; in the northern parts of Africa it commences about the beginning of July, but in the more southern districts about the latter end of December. The early naturalists have divested the ostrich of all affection for its young, asserting that the female lays her eggs in the sand, and leaves them to be hatched by the power of the sun. Even the author of the Book of Job, in allusion to this bird, says, "*Which leaveth her eggs in the earth, and warmeth them in the dust, and forgetteth that the fool*

may crush them, or that the wild beast may break them. She is hardened against her young ones, as though they were not hers; her labour is in vain without fear, because God has deprived her of wisdom, neither has he imparted to her understanding."

From the concurrent testimony, however, of recent travellers, the stigma of the want of affection for its young does not attach to the ostrich; for we are assured by Kolben, Vaillant, Barrow, and others, that, so far from being callous towards her offspring, there is no bird which watches over her eggs with greater assiduity. In regard to the number of eggs laid by the ostrich, a manifest error prevails, as it is generally believed that the female lays sixty or seventy at a time; but it has been decided by Kolben that all the females attached to one male lay their eggs in one nest, and it has been confirmed by Vaillant that they also relieve each other in the task of incubation; for he says that he once found a female ostrich on a nest containing thirty-two eggs; he remained near the place for some time, and saw three other females come and alternately seat themselves on the nest, each sitting for about a quarter of an hour, and then giving place to another, who, while waiting, sat close by the side of her whom she was to succeed. The same intelligent traveller informs us that he never found an ostrich nest, without also finding eggs deposited on the outside of it, which are designed for the nourishment of the future young. Mr. Barrow states that a number of small oval-shaped pebbles, about the size of a marrow-fat pea, are often found in the interior of the egg; the colour of the pebbles is a pale yellow, and exceedingly hard. He once saw nine, and at another time twelve of these pebbles in one egg. The ostrich is gifted with an uncommon memory in regard to the position in which she leaves her eggs; and if, in the interval, any person touches them, the bird not only desists from laying any more in the same nest, but in the fulness of her indignation, she tramples every egg in the nest to pieces with her feet.

In regard to the character of the ostrich, they are tamed with very little trouble in their native country, and in their domesticated state, few animals may be rendered more useful. In their carriage towards those who are acquainted with them, they are highly tractable and familiar, but towards strangers they often evince an extraordinary fierceness. Their method of attack is to run furiously upon their opponent and to push him down, and having laid him prostrate, they peck at him with their beaks, or strike him violently with their feet; and when they think that they have overcome their adversary, they stand in triumph over him, making a kind of cackling noise: at night, they often send forth a doleful, hideous cry resembling the hoarse tone of a bear.

The Female Ostrich which is designated in our engraving was brought with the male from the coast of Barbary, and presented to his Majesty, who sent them to North Cray to enrich the collection of the late Marchioness of Londonderry. It is one of the most perfect birds of the species now in this country, but the male appears rather in a distorted shape, owing to the following circumstance: It was one day rambling the beautiful grounds which surround the mansion of the late Marchioness, when a playful lama suddenly sprung up and kicked the ostrich in the neck. From this arose a violent swelling, but still great hopes were entertained that the bird would not sustain any permanent injury. One night, however, a fox stole into the premises and seized the unfortunate bird by the wounded part of the neck, which put an end to all hope of a radical cure, and the bird now carries his neck and head in a crooked posture. In other respects it is as perfect as the female. It was the subject of exultation of the late Marquess of Londonderry that he was the only person at the coronation of George IV., who wore a plume of feathers from his own ostriches.

THE WOLVES OF HUDSON'S BAY.

THE HUDSON'S BAY WOLVES,

OR

THE CLOUDED BLACK WOLVES,

IN THE MENAGERY OF THE TOWER, AND INTRODUCED INTO THIS COUNTRY BY CAPTAIN PARRY.

In the desert and inhospitable regions of the Polar Circle, where the foot of the hunter alone is heard, and nature appears in all the solemn grandeur of everlasting sterility, the howl of the Clouded Wolf reverberates amongst the rocks, startling the timid deer from its mossy lair to fall an easy victim to its ferocious appetite.

The human mind turns away with loathing and disgust from the contemplation of the natural character of the wolf, than which a creature more brutal in its manners is scarcely to be exhibited in the animal world. Its truly savage disposition, its ferocious propensities and insatiable rapacity, joined to its sanguinary habits, have always rendered it an object of dread and hatred wherever it has domesticated itself. The flesh of the wolf is not eaten by any living creature whatever, which is a characteristic peculiar to that animal, and its breath is so offensive, owing to the corrupted matter on which it indiscriminately feeds, that it is called, in some parts of France, *la bête puante.* The races of wolves, which are dispersed over the earth, from the common wolf to those which are now the immediate object of our discussion, are exceedingly various and dissimilar; but, in establishing the distinct species of wolves, some very great and almost insuperable difficulties present themselves. The anatomical structure of almost all of them presents not those distinguishing marks from which the existence of a distinct species can be deduced; and in their general form, the only test of comparison is in a greater or less corporeal magnitude, which may arise from causes which have no immediate reference to the establishment of a distinct species, such as climate, abundance of food, and other similar incidental circumstances, which might have a direct tendency to promote the developement of the physical power of the animal. In the external appearance of the race of wolves, a manifest diversity is exhibited, although the shades of character, by which the difference can be established, are so slight as to throw considerable obstacles in the way of the zoologist in his endeavours to class them under their respective species.

As, however, we shall have occasion to enter more diffusely into the natural history of the Wolf, when treating of it under its respective head, we shall now proceed to the description of the animals which form the subject of our engraving.

The Hudson's Bay or Clouded Wolves may be considered as a distinct species, and we are indebted to the enterprising Captain Parry for their introduction into this country. They were presented by that celebrated navigator to Mr. Cops of the Tower Menagery, in whose possession they now remain; the statement, therefore, which has been published, of the animals having been presented by the Hudson's Bay Company, is evidently erroneous. They may be considered as the only individuals of the species which have been brought alive to this country, and in form and muscular power they differ essentially from the common type; nor in the expression of their countenance do they betray that sanguinary disposition and determined cruelty, which are the decided characteristics of the common wolf. A protracted confinement may, indeed, have softened their natural ferocity; for to those whom they are accustomed to see about them daily, they exhibit all the fawning and friendly disposition

of the dog, rolling themselves on the floor of the den, and seemingly inviting their keeper to caress them. That they are capable of attachment to the person is also evident from the circumstance of the extreme delight which they always evinced on the appearance before their den of an officer of the Guards who was quartered in the Tower, and who was accustomed to pay them a daily visit. The animals no sooner observed him approaching, than by their bounds and antics they manifested all the joy of the dog on encountering his master. In their general appearance, they are more formidable than the common wolf, but they have not the malignant scowl of the latter; and it is evident that their prevailing dispositions are of a more noble and dignified cast. On their first introduction to the Tower, their colour was not so black as it is at present, partaking more of the dark grey, or rather of the clouded colour, which induced Mr. Say, in the notes to the published narrative of Major Long's Expedition from Pittsburg to the Rocky Mountains, to give the animal the name of the Clouded Wolf. The skin and the sides of the mouth are nearly white, and round the neck appears a ring, in which the grey tinge predominates, and this tinge extends to the lower part of the belly, where it becomes almost a white. The hair of the inside of the fore-legs also approaches to white, and the upper part of the animal, being almost a deep black, gives the animal a pleasing and diversified appearance. The extreme thickness of the hair bespeaks it to be a native of a high northern latitude, consistently with the provisions of Nature, which bestows on each animal a covering suitable to the climate in which it is destined to live.

A great naturalist has said, "Shew me the tooth of an animal, and I will give you its whole history, although I never saw the animal in my life;" nor was this a presumptuous nor an extravagant boast. By the magnitude of the tooth an estimate may be formed of the size of the animal; and by the configuration of the tooth, adapted either for grazing or the laceration of flesh, we attain to the knowledge of the animal being herbivorous or carnivorous. The inspection of the mouth of a wolf declares it at once to be a carnivorous animal, and the strength of its jaws demonstrates the power which it possesses in crushing the bones of its prey. In these characteristics, the Hudson's Bay wolves far exceed the European ones. They tear their food with an avidity truly rapacious, not stopping to masticate it, but swallowing it in lumps as they tear it from the bone. Having divested the bone of all the flesh, they then begin to quarrel for the former, in which the natural ferocity of the animal is fully exhibited; but in these quarrels the female is always obliged to yield to the superior strength of the male.

Although these animals have now been domesticated for a considerable length of time in this country, they have shewn no disposition whatever to propagate their species; consequently, their time of gestation, and other circumstances connected with their natural history, cannot be satisfactorily ascertained.

In height, the male, which is the larger of the two, appears to be about three feet, and from the end of the mouth to the tip of the tail about seven feet. Their skin is eagerly sought after by the natives of the country, as it forms a part of their winter clothing, and also an article of traffic with the Hudson's Bay Company. A very fine skin was brought to this country by Captain Franklin, and presented by him to the Zoological Society, in whose possession it now remains.

The Hudson's Bay wolves sometimes wander on the ice of the sea in quest of young seals, which they catch whilst they are asleep. But this repast often proves their death, for the ice is sometimes suddenly detached from the shore, and carries the wolves to a great distance from the land before they are sensible of it. In this manner some districts are happily delivered from the presence of these formidable animals.

THE ZEBRA.

THE ZEBRA OF THE PLAINS,

IN THE MENAGERY, ROYAL MEWS, LONDON.

THERE are few animals which are exhibited in the menageries of this country which possess stronger claims to beauty than the Zebra ; but, on the other hand, it is perhaps, of all animals, considering the species to which it belongs, the most wild and untameable. The horse, the ass, and the zebra form a well-known group, and are distinguished from all other quadrupeds by the form of their hoof, which is single and undivided, rounded in front, of considerable thickness, and enveloping the extremity of their only apparent toe. The zebra, in shape, rather resembles the mule than the horse or the ass. It is rather less than the former, and yet larger than the latter. Its ears are not so long as those of the ass, and yet not so small as those in the horse kind. Like the ass, its head is large, its back straight, its legs finely placed, and its tail tufted at the end ; like the horse, its skin is smooth and close, and its hind quarters round and fleshy. The greatest beauty, however, of this animal lies in the amazing regularity and elegance of its colours.

The ground colour of the whole body of the zebra is white, interrupted by a regular series of broad black stripes, extending from the back across the sides, with narrower and fainter ones intervening between each. The ears are variegated with a white and dusky brown ; the neck has broad stripes of the same dark brown running round it, leaving narrow white stripes between ; along the back there is a narrow longitudinal line, bordered on each side with white : a line of separation also runs between the trunk of the body and the hinder quarters on each side, between which, on the rump, is a plat of narrow stripes, joined together by a stripe down the middle to the end of the tail. The colours are not so lustrous in the female, and in none do the stripes seem entirely to agree in form, but in all they are equally distinct.

The scorching plains of Africa are the natural domicile of the zebra, but of its habits in a state of nature our information is very limited. It is also found in the kingdom of Angola, and, according to Lopez, it is also a native of Barbary. The natives of Angola have, however, no other idea of advantage from horses than as far as regards their excellence for food ; it is not, therefore, the fine stature of the Arabian courser, nor the delicate and elegant colourings of the zebra, that have any allurements to a race of people who only consider the quantity of flesh, and not the conformation of the animal. The delicacy of the zebra's shape, or the painted elegance of its form, are no more regarded by such people, than by the lion, which makes it his prey. For this reason, the zebra may hitherto have continued wild, because it is the native of a country where there have been no successive efforts made to reclaim it. All pursuits that have been hitherto made against it, have been rather against its life than its liberty ; the animal has thus been long accustomed to shun man, as its most inveterate enemy, and our surprise therefore need not be excited that it refuses to yield obedience where it has seldom experienced mercy.

It is, however, by no means improbable that some means may be ultimately discovered of taming the zebra, and rendering it serviceable to man, for which its strength and swiftness so peculiarly fit it. The Portuguese pretend, indeed, that they have been able to tame them ; and Dapper informs us that four zebras were sent from Africa purposely to draw the coach of the King of Portugal, and that the experiment was attended with complete success. When, however, we take into our consideration that, during the time when the Dutch held possession of the Cape of Good Hope,

several zebras were sent to Holland, to be broken in for the Stadtholder's carriage, but that, after the most indefatigable pains, the task was relinquished as not practicable; and if we further reflect, that our late Queen Charlotte attempted the same task, but could never accomplish it, we feel disposed to consider the statement of Dapper as not founded on truth, especially as he does not affirm that he was himself an eye-witness of the fact. Pyrard relates, that several zebras were sent to Brazil, but that not one of them could be tamed; indeed, they were so very wild and untractable, that they would permit only one man to approach them—and on a particular occasion when one of them got loose, he actually killed the groom, having bitten him to death. Notwithstanding, however, these facts, apparently so decisive of the untractable nature of the zebra, it must be considered that they are very seldom sent to this country whilst very young, and consequently their habits of wildness have become too inveterately fixed to be subdued by the art or discipline of man.

The repeated failures in the subjection of this animal have given rise to some speculative experiments, as to how far the breed of the ass in this country might be improved by an intermixture with the zebra. In 1761, an attempt was made at Versailles to establish a breed with a male zebra and a female ass, but notwithstanding the similarity of their species, the experiment wholly failed. The failure at the time was attributed to a neglect in accustoming the zebra, for some time previously to the spring, to the society of her new companion, which nature points out to be necessary, in a certain degree, between animals of the same race, but differing in their species. The most extraordinary experiment of this kind, however, was tried by Lord Clive, to whom, on his return from India, whilst stopping at the Cape of Good Hope, a present was made of a female zebra, which he brought with him to England, and turned it into his park at Clennom. At the proper season, his Lordship, being desirous to obtain a cross breed, confined the zebra with an ass, but the former testified the utmost reluctance to enter on any terms of familiarity with her new associate; his Lordship therefore hit upon the most extraordinary expedient of cheating the zebra, and he actually had the ass painted in every particular like a zebra, and the consequence was that the animal was duped, and the result was a fine male foal, resembling in every respect its mother. Of the authenticity of this fact little doubt can exist, as, in a letter from Lord Chatham to Buffon in 1778, he says, "During a late visit to Clennom, I made particular inquiry respecting the female zebra and her foal, when I was informed that the former was dead, and that the foal had been sent to an estate of Lord Clive's, at a distant part of the county. Several attempts have been made to perpetuate the breed, but without success."

The zebra is not to be found either in Europe, Asia, or America, and yet it is nevertheless very easily fed. From the near resemblance which it bears to the horse and the ass in structure, a great probability exists that it brings forth its young as they do, annually. The noise which they make is neither like that of a horse nor an ass, but more resembling the confused barking of a mastiff dog. It is thought by some persons to have a distant resemblance to the sound of a post-horn, and it is more frequently exerted when the animal is alone, than at any other time.

The zebra is by no means a rare animal in the menageries of this country. There are at this time four in the Collection of Mr. Cross, the most beautiful of which has been selected for the embellishment of this work. Their state of confinement precludes any decided opinion being formed of the natural habits of the animal, but it has perhaps tended to curb their natural wildness, and to reduce them to that docility, which renders them such favourite objects of the curiosity of the public.

A most beautiful specimen has lately been added to the Royal Menagery in the Tower, and in point of tameness and docility it is one of the most interesting of the kind that has ever been exhibited in this country.

THE AMERICAN BISON,

IN THE MENAGERY, ROYAL MEWS, LONDON.

The Bison and the ox are but two particular races of the same species, although an essential difference exists between the two, not only in the hump or wen which the former carries on its shoulder, but also in the quality, the quantity, and the length of its hair. The Bison is a native of various parts of the world, and in the interior regions of North America it is found in immense herds feeding on the open Savannahs, morning and evening, and retiring during the sultry parts of the day to repose near shady rivulets and streams of water. It was formerly believed that the Bison inhabited the north of Europe; and, according to Gesner, it was once the inhabitant of Scotland, but certainly not within the memory of the present generation. The Bison of Madagascar,—which appears to be of a larger species than the American Bison,—was exported from that island to the Isle of France, and the climate was found to agree exceedingly well with the constitution and habits of the animal; it is however remarkable, that after a few generations the hump on the back gradually dwindles away, but still all the other characteristics of the animal appear not to suffer the slightest alteration.

There is, perhaps, nothing more striking or interesting in the study of Natural History, than the establishment of the distinct territorial boundaries which are affixed to different races of animals, beyond which they never transgress, appearing as it were to be confined to that particular region by some mysterious power inexplicable to the capacity of man; and it is generally found, that, should an infraction of that boundary ever take place by an isolated individual, as in the instance of the accidental migration of the whale to the southern latitudes, it generally falls a victim to some enemy, against the attack of which nature has not provided it the means of defence; or the very food on which it is obliged to subsist, not being congenial to its constitution, turns out ultimately to be the cause of its death. The Bison offers a striking verification of the above remark, for, although it be found in herds from the Illinois to the southern coasts of America, it has never yet been known to pass the countries which form the isthmus of Panama; it is, in fact, a total stranger to southern America, although the climate of that country appears to be highly congenial to its nature, as is evinced by the extraordinary multiplication of the European ox.

The principal characteristics of the Bison are short rounded horns, pointing outwards, although some of them have their horns depressed, whilst others have them raised in such a manner that they are used as weapons of annoyance or defence. The enormous bushy mane, with which its head is surrounded, partakes more of the nature of wool than hair, hanging down in separate tufts like an old fleece; but, in the American Bison, this wool is thicker and longer than in the Bison of the ancient continent. In the examination of the construction of this animal, we discover that it partakes something of the nature of the lion, particularly in its narrow hinder parts when compared with the thickness and strength of the fore parts,—in fact, its whole frame appears to fit it more for a state of war with mankind, than a state of servitude. The strength of the Bison is indeed so amazingly great, that when they fly through the woods from a pursuer, they frequently brush down trees as thick as a man's arm, and although the snow may be very deep, such are their strength and agility, that they are able to plunge through it much faster than the swiftest Indian can run in snow shoes. "To this,"

says Mr. Hearne, "I have many times been an eye-witness. I once had the vanity to think that I could have kept pace with them, for although I was at that time celebrated for running fleetly in snow shoes, I soon found that I was no match for the Bisons, notwithstanding they were plunging through such deep snow, that their bellies made a trench as large as if many heavy sacks had been hauled through it." When the land is moist, they frequently leave so deep an impression of their feet as to be traced and shot by the artful Indians. In this undertaking, however, it is necessary that the men should be particularly careful, for when they are only wounded, the animals become excessively furious. The hunters march against the wind, as the faculty of smell in the Bison is so exquisite, that the moment they get scent of their enemy, they retire with the utmost precipitation. In taking aim, the hunter directs his piece to the hollow of the shoulders, by which means he generally brings down the animal at one shot, but if not killed, the Bison immediately runs upon him, and with his horns and hoofs tears him in pieces, or tramples him to death.

The sagacity which is exhibited by the Bison, in defending itself from the attack of the wolves, is a surprising instance of natural instinct. Whenever the Bisons scent the approach of a drove of those ravenous creatures, the herd throws itself into the form of a circle, having the weakest in the middle, and the strongest ranged on the outside, thus presenting an impenetrable front of horns.

In Canada, the hunting of the Bison is a common employment of the natives: they draw up in a large square, and commence their operations by setting fire to the grass, which at certain seasons is very long and dry. As the fire burns onward, they advance, closing their ranks as they proceed. The animals, alarmed by the light, gallop confusedly about till they are hemmed in so closely, that frequently not a single beast is able to escape.

In Louisiana, the system of hunting the Bison is pursued by men mounted on horses, each man being armed with a sharp-pointed spear. The hunters approach with the wind, and as soon as the animals smell them, they instantly seek to escape, but the sight of the horses checks their fear; and the greater number of the Bisons are, at a certain time of the year, so fat and unwieldy as easily to be enticed to slacken their pace. As soon as the hunters overtake them, they endeavour to plunge the spear just above the ham, in such a manner as to cut through the tendons, and render them afterwards an easy prey.

The uses of the Bison, when dead, are various. Powder-flasks are made of the horns. The skins form an excellent buff leather, and, when dressed with the hair on, serve the Indians for clothes and shoes. The Europeans of Louisiana use them for blankets, and find them light, warm, and soft. The flesh is used as food, and the hump on the shoulders is esteemed a great delicacy. The bulls, when fat, frequently yield each a hundred and fifty pounds weight of tallow, which forms a considerable article of commerce. The hair is spun into gloves, stockings, and garters, that are very strong, and look as well as those made of the finest sheep's wool. We are assured by Governor Pownal that a most luxurious kind of clothing may be manufactured from it.

Mr. Turner, who resided a long time in America, is of opinion that the Bison is superior even to our domestic cattle for the purposes of husbandry, and has expressed a wish to see this animal domesticated on the English farms, or at all events that a breed might be obtained by an intermixture with our common cow, with which the Bison has been known to breed; for, speaking comparatively of the ox and the Bison, Mr. Turner says, "that to judge from the extraordinary size of his bones, and the depth and formation of his chest, I should not think it unreasonable to assign nearly a double portion of strength to this powerful inhabitant of the forest. Reclaim him, and you gain a capital quadruped both for the draught and for the plough; his activity peculiarly fits him for the latter in preference to the ox."

THE RUSA-DEER, OR SAMBOO STAG,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The deeper we search into Nature, the stronger will be our conviction of our limited knowledge respecting the extent of her treasures, and at every step which we take we shall have occasion to find that protracted inquiry is more apt to teach us modesty, than to render us vain of the information which we have already acquired. In treating of the natural history of foreign animals, particularly of those which are of recent importation, and which have been hitherto unknown in the country, a considerable difficulty presents itself, inasmuch as it seldom happens that those by whom the animal has been introduced, have been so far instigated by a love of science as to bring with them any accurate and scientific information of its habits, character, and dispositions in its savage state; and thus the only clue to its history is that of analogy with any other variety of the genus, with which we may have been previously acquainted.

The foregoing remarks are peculiarly applicable to the present subject, for its natural history is yet but imperfectly known to zoologists; and, in fact, it has not yet been introduced into some of the standard works which are considered as the most complete in the natural history of quadrupeds.

The whole of the deer tribe are distinguished for their extreme agility and timidity, principally inhabiting, in their undomesticated state, the most wild and woody regions, and possessing such an instinctive fear of man, that in some of the species all attempts to tame it, or to render it tractable, have wholly failed. We are as yet acquainted with few species of the deer kind, yet it is remarkable that the race appears to be diffused over all parts of the earth. On the vast plains of America, where neither the sheep, the goat, nor the gazelle, have been originally bred, animals of the deer kind are to be found in vast numbers; and in some countries, particularly Lapland, the deer form the most valuable property of the natives.

The Rusa-Deer or Samboo Stag possesses the general characteristics of the deer tribe, and in appearance strongly resembles the stag, which was formerly so great an ornament to our forests and the parks of our nobility. It is a native of India, and was, with another of its species, presented to his Majesty, who, with the view of domesticating them, turned them into the great park at Windsor; disdaining, however, to congregate with the native deer, they sought the most unfrequented parts of the domain, and being both males, and having none of their fellows to quarrel with, they waged a continual war with each other, and as a great fear was entertained that the death of both, or at least that of one of them, would be the consequence, it was deemed prudent to separate them; dearly, however, has the delinquent in the Tower paid for his outrageous conduct, by being obliged to exchange the fresh and wholesome herbage and the unbounded liberty of Windsor Park for a small square enclosure in the Menagery of the Tower, having for its companion, on one side, the snapping pelican, and on the other, the spitting Llama.

Like all ruminating animals, with the exception of the Llama, the Samboo Stag has eight front teeth in the lower jaw, the upper being toothless, although in some of the species of deer a single canine tooth is found on each side of the upper jaw.

The horns of the Samboo Stag differ from those of the other species, by having a single antler at

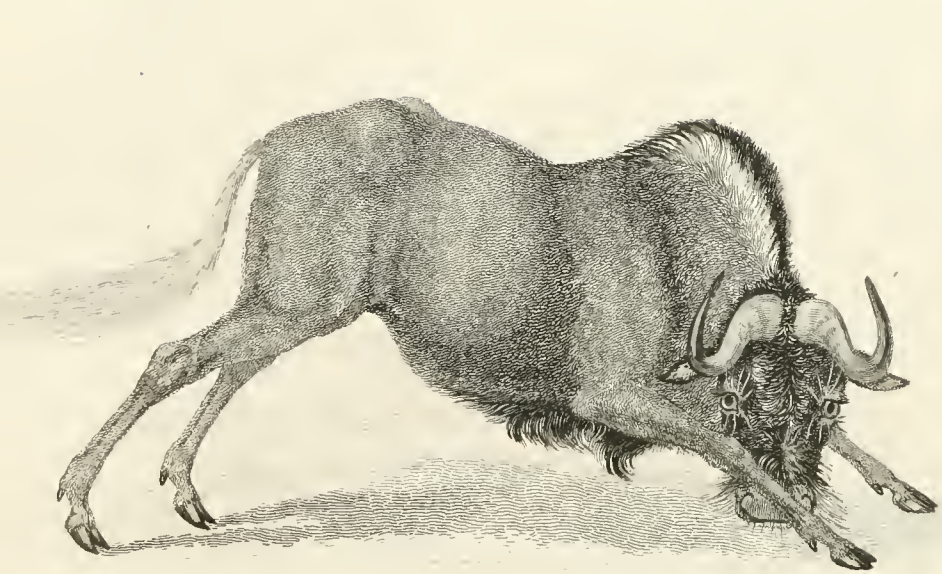
the base, and when they have attained their full size they consist of a broadish burr, at the end of which the lower antler rises nearly in a perpendicular position; and also of a kind of stem, which at its base has an outward direction, but which, as it rises, takes a bold curve inwardly,—the whole being terminated by a fork, the branch of which is shorter than the stem, and about six or seven inches in length. The entire length of the horns is about two feet, their colour is dark, and the grooves of them very deep.

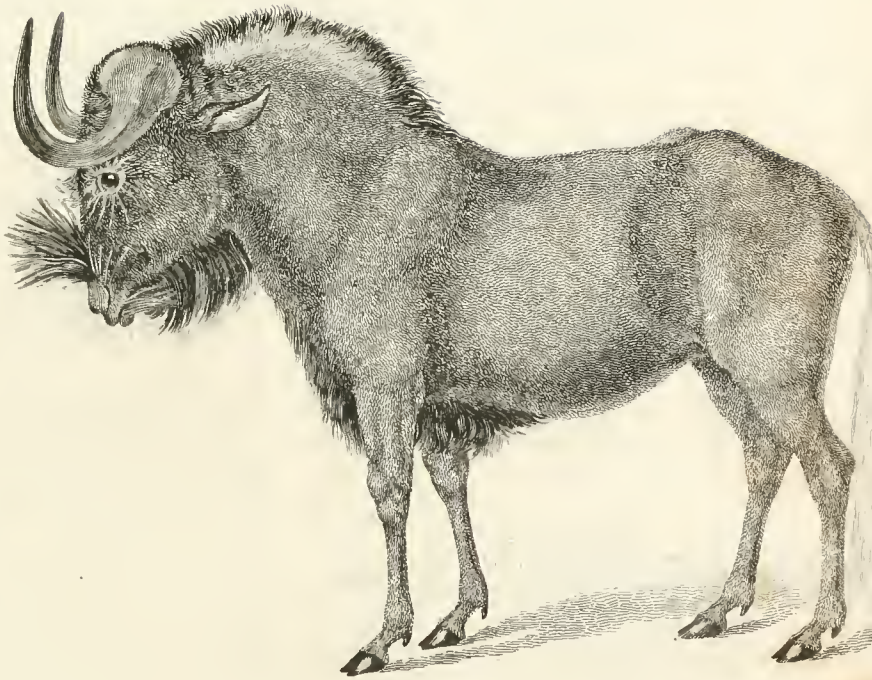
It must, however, be observed that the above description of the horns is applicable to the state in which they appeared when the drawing of the animal was made: but it is remarkable that the horns present a different form every year, though to what cause this is to be attributed, or whether it is to be considered as a monstrosity, or as a peculiar and natural feature, cannot, at present, be satisfactorily ascertained.

In regard to the suborbital sinus, or slit, which, in the Samboo Stag, is of very considerable size, it is evident that its use is particularly connected with the function of respiration, and it is a peculiarity belonging to the structure of the deer's head, which has long excited the attention and curiosity of the naturalist. It has been proved by Mr. White, that the suborbital slits have some communication with the nostrils; and although this statement, at the time when it was promulgated, was called in question, and by some rejected as having no relation with truth, yet subsequent research has discovered, and even the examination of the animal now under our consideration has confirmed it; for when the animal drinks, the air may be distinctly felt in its passage through the suborbital slits, and if a feather be applied to the opening, the effect of the air is immediately perceptible. These slits are, undoubtedly, highly serviceable to all the species of the deer in the chase, by affording them the means of free respiration, as they may be considered in the character of an additional nostril. It is also considered that the suborbital sinus has some connection with the sense of smell, for it has been observed that the animal applies these orifices to its food, opening and closing them with great quickness, as if it were inhaling the freshness, or salubrity of its food. Mr. Pennant, speaking of this singularity in the Deer tribe, says, "on holding an orange to one, the creature made the same use of those orifices as of his nostrils, applying them to the fruit, and seeming to smell it through them."

The stature of the Samboo stag may be considered as between the Elk and the Stag: like the former it sometimes browses on the leaves of trees, but still its neck is not so long as to prevent it grazing, nor in the choice of its food does it appear to possess that extraordinary niceness which distinguishes the common Stag. In the Tower, hay is its principal sustenance; but it will scarcely admit of a question whether a continued restriction to that kind of artificial food will not in the end be injurious to the animal.

The colour is a dark cinereous brown, approaching almost to a black on the throat and breast, and the inside of the legs is a fawn colour, exhibiting in some places a dirtyish white. The mane, which is remarkably thick and shaggy, hangs over the neck and throat; and the nose, which is almost black, appears almost as if enveloped in its muzzle: the ears are almost bereft of hair in the inside, which is the general characteristic of all animals whose sense of hearing is acute. Indeed the senses of smell and hearing in this animal appear uncommonly fine; at the slightest noise it seems to stand in a listening posture, with its ears erect, as if prepared to bound away on the perception of the smallest danger. Its eyes are encircled by a light coloured disc, and its fore-knees exhibit patches of the same colour; its tail on the uppermost part is black, and a light fawn colour underneath. It is, when observed in its erect posture, an elegant animal; and little doubt can exist, judging from analogy, that its flesh forms a salubrious food to the natives of the country where it is indigenous.





THE GNU.

IN THE MENAGERY OF MR. CROSS, KING'S MEWS, LONDON.

It is in the vast and unpeopled deserts of Africa, that Nature appears to sport in all the plenitude of her power, in the creation of animals, from the highest degree of savage ferocity, to the very opposite extreme of tameness and timidity. In no animal, however, does she appear to have employed her prolific energies with greater latitude, than in the subject of the present sketch. It may justly be designated as one of her monstrosities, if such an epithet can in any instance be applicable to an animal which is an immediate creation of Nature, or, in other words, which is the work of an omnipotent God. It is in the contemplation of such an animal as the Gnu, that the human mind is lost in wonder at the infinite diversity displayed in the animal kingdom, which in itself may be considered as a vast and splendid theatre, wherein the astonishing treasures of Nature are exhibited for the instruction and benefit of the human race.

The Gnu may with the utmost propriety be styled an amalgamation of several animals. In the head, it resembles the Ox; in the hinder parts, the Horse; in the slender and elegant make of its legs, it bears a strong affinity to the Antelope. In its motions, when under the influence of rage, it resembles the buttings of the Goat; in its speed, it almost surpasses the Horse; and in its fierceness, it departs from the nature of both the Horse and the Ox, and exhibits the character of the most savage quadruped. It is, in fact, almost a centaur of the fabulous ages—half Horse, half Ox, in its habits partaking of the nature of both, and yet in its species distinct and separate. The Gnu, according to the classification of the early zoologists, belongs to the genus Capra, but it is decidedly erroneous; it bears no greater affinity to the Goat, than it does to the Horse, the Ox, or the Antelope, possessing the characteristic properties of all the three, and yet not so strongly defined as to warrant the naturalist to class it under either of those genera. As a ruminating animal, and judging by the construction of the fore part of its body, it ought certainly to be classed in the Ox tribe; but if, on the other hand, we examine the hinder parts, we there find all the characteristics of the Horse. Its horns are scabrous, and uncommonly thick at the base, having a forward inclination close to the head, and then suddenly reverting upwards. These horns appear to be weapons of a most formidable nature, and calculated to withstand any force which may be opposed to them. In its rage it will often drop on its knees, running with great swiftness in that singular posture, and at the same time furrowing the ground with its horns and legs. In disposition, it appears to be fickle in the extreme, at one moment so highly instigated by rage, as to attempt to break the inclosure in which it is confined with its horns, and the next moment taking the bread which is offered to it with the utmost tameness and placidity. The shape of the mouth is square, the nostrils being covered with broad flaps. From the nose, half-way up the front, is a thick, oblong-square brush of long, stiff, black hairs, reflected upwards, on each side of which the other hairs are long, and point closely down the cheeks. Several strong hairs are disposed in a radiated form round the eyes, imparting to it a most repellent aspect, indicative of wildness and ferocity. The neck is short and arched, surmounted by a strong and upright mane, extending from the horns beyond the shoulders; on the chin is a long whitish beard, and on the gullet is a very long pendulous bunch of hair, and it is this characteristic which, most probably, induced the ancient zoologists

to class the Gnu in the capra tribe. The hairs are very long and black on the breast and between the fore-legs, but the hair on the hinder part of the body is not longer than that of the horse. The tail reaches to the first joint of the legs, full of hair of a whitish hue, and when viewed from this part, the animal has all the appearance of a Galloway. The predominant characteristics of the horse are here decidedly manifest; and the opinion of Lacepède becomes strongly confirmed, that the Gnu will be ultimately considered as forming a distinct species, and that it cannot be classed under any of the tribes to which it has been hitherto supposed to belong.

The body of the Gnu is thick, covered with smooth short hair of a rusty brown or ash colour, tipped with white, forming a singular contrast with the black and bushy hair of the fore-part of the body. The feet have only one spurious hoof on each.

The most remarkable characteristic of this animal, however, is the suborbital sinus, or the lachrymal furrow of the Antelope; and when we consider the slender and elegant make of its legs, resembling those of the Roebuck, we must allow that the earlier zoologists possessed some valid authority for classing the Gnu in the same tribe as the Antelope: judging by analogy, we must suppose that the suborbital sinus of the Gnu is adapted to the same purposes as that of the Antelope, and that its uses are particularly effective in the rapid flight of the animal, which is little inferior to that of the Antelope itself.

The ordinary size of the animal is that of a common Galloway, the length of it being rather above six feet, and the height of it about four feet. They inhabit, in great numbers, the fine plains of the Great Namacquas, a considerable distance from the Cape of Good Hope, extending from lat. S. 25° to 28° 42′. The Hottentots have given it the name of Gnu, from the sound of its voice, which has two notes, one resembling that of an Ox, the other more clear. In the above plains they are so numerous, that it is by no means uncommon to see several hundreds in a herd together; they are represented, however, as very fierce animals, and as they congregate in herds, it is a matter of great difficulty and danger to attack them, for in their nature they are extremely treacherous, and will conceal themselves in the thickets and woods, and thence rush forth on the unsuspecting traveller, or the unguarded hunter. The manners of these animals are very extraordinary, for on the sudden appearance of any one near them they dash off in full gallop, and, having attained the distance of about two hundred yards, they wheel round and march boldly towards the advancing person; furrowing the ground with their horns, and exhibiting other indications of rage. They then gallop off again, but shorten the distance to about fifty yards, and then advance as before. These manœuvres are practised until they come within a few yards of the person, when it is generally considered prudent to leave them, as were any further provocation to be given, a great probability exists that they would become the assailants, and of the issue not the slightest doubt can be entertained.

The flesh of the Gnu resembles that of the Ox, and is in much request with the natives of the country, but all attempts to domesticate the animal have hitherto proved abortive. In its state of confinement it appears rather a placid animal, but any opinion which is formed of the characteristic habits of an animal in a state contrary to its nature must necessarily be subject to great suspicion, as they are constrained to exhibit themselves under a wholly different character when subject to the controul of man, than when roaming free and unfettered in their native wildernesses.

THE KANGAROO.

THE KANGAROOS,

IN THE COLLECTION OF EARL DARNLEY, AT COBHAM HALL, KENT.

It was in the year 1770, that this truly interesting animal was discovered in New Holland, by some of the persons who accompanied Captain Cook in his first voyage round the world, and only three species of them have as yet been ascertained, all of which are natives of that insular continent. It appears, indeed, to be the chief animal production of that country, to the exclusion nearly of all the other mammalia, with the exception, perhaps, of the dog, which appears to be almost the inseparable companion of the human race.

The Kangaroos have been frequently known to measure as much as nine feet in length from the tip of the nose to the end of the tail, and to weigh one hundred and forty pounds. The head and anterior parts are very slender and delicate, and they gradually increase in thickness as far as the loins; the fore-feet are furnished with five toes, and are seldom more than about nineteen inches in length, whilst the hinder ones have only four toes, and are sometimes three feet and a half long; they are perfectly bare and callous beneath, possess uncommon strength, and when sitting erect, the animals rest on the whole of their length. The claws are only three in number, the middle one greatly exceeding the others in length and strength, but the inner one is of a peculiar structure; at first sight it appears to be single, but on further inspection it seems to be divided down the middle, and even through the ball of the toe belonging to it.

From the general form and structure of the Kangaroo, it is at once apparent that its chief progressive motion must be by leaps. In those exertions it has been known to exceed twenty feet at a time, and this so often repeated, as almost to elude the swiftness of the fleetest greyhound. It is able with ease to bound over obstacles nine feet or more in height.

The chief strength of the Kangaroos lies in their tail, which they use occasionally as a weapon of defence, and with which they can strike so severe a blow as to break the leg of a man. But the tail is not their only weapon, for when they are hunted by dogs they use both their claws and teeth; on the animals seizing them, they turn, and catching hold with the nails of the fore-paws, strike the dog with the claws of their hinder feet, and sometimes lacerate the body in a very shocking manner.

The teeth of the Kangaroo are only of two kinds, having six incisors in the upper jaw, emarginated, and only two in the lower; the former are short, arranged in a curved line, and the latter are long, sharp, and pointed forwards; on each side of the jaw are five grinders, at some distance from the other teeth.

In regard to their natural habits in a wild state, our knowledge of them is very imperfect. They are represented to live in burrows under ground, and their chief subsistence is vegetable substances, but chiefly grass and roots. They feed in herds thirty or forty together, and it is generally to be observed, that some of the older males are stationed at a distance to give an alarm in the event of approaching danger. They appear to be nocturnal animals, having a nictitating or winking membrane placed at the interior angle of the eye, capable of being extended at pleasure entirely over the ball.

The Kangaroos belong to the marsupial tribes, exhibiting a character intermediate between the quadrumana and the carnivora; the female Kangaroo seldom brings forth more than one at a birth,

and this when first born is so exceedingly diminutive as scarcely to exceed an inch in length, and weighing not more than twenty or twenty-two grains. It is received into the abdominal pouch of the mother, though its mouth is merely a round hole, just large enough to receive the point of the nipple. The mouth, however, gradually extends with age, until it be capable of receiving the whole nipple, which then lies in a groove formed in the middle of the tongue. At this period of its growth, feeble as it is in other respects, its fore-paws are comparatively large and strong, and the claws extremely distinct, to facilitate the motion of the little animal during its residence in the pouch; the hinder legs, which are afterwards to become very long and stout, are now both shorter and smaller than the others. The young one continues to reside in the pouch till it has nearly attained its full maturity. It occasionally creeps out for exercise or amusement, and even after it has quitted this maternal retreat, it often runs into it for shelter on the least indication of danger.

The Kangaroo generally feeds standing on its four feet in the manner of other quadrupeds, and it drinks by lapping. In a state of captivity it has a trick of sometimes springing forward and kicking in a forcible manner with its hind feet, during which action it rests or props itself on the base of its tail.

In the work lately published, entitled "Two Years in New South Wales," by Mr. Cunningham, he relates the following interesting anecdote respecting the Kangaroo, which may be justly characterized as a specimen of Kangaroo waggery.

"One of the largest tame Kangaroos I have seen in this country," he says, "is domiciled here, and a mischievous wag he is, creeping and snuffling cautiously towards a stranger, with such an innocently expressive countenance, that roguery could never be surmised to exist under it—when having obtained, as he thinks, a sufficient introduction, he claps his fore-paws on your shoulders, as if to caress you, and raising himself suddenly upon his tail, administers such a desperate push with his hind legs, that it is two to one but he drives you heels over head. This is all done in what he considers facetious play, with the view of giving you a hint to examine your pockets, and see what *bon-bons* you have got for him, as he munches cakes and comfits with epicurean goût, and if the door be ajar, he will gravely take his station behind your chair at meal-time, like a lackey, giving you an admonitory kick every now and then, if you fail to help him as well as yourself."

Their flesh is eaten by the colonists, and is said to be highly nutritious and savoury, and this assertion has been confirmed by those who have partaken of it in England. It is the principal object of the chase in its native country, and those who have enjoyed the sport, represent it as highly ludicrous on account of the extraordinary motion of the animal in its repeated bounds, and the stratagems which it makes use of to effect its escape. In a state of confinement it perambulates its den in a circular track, scarcely ever crossing it except for the purpose of procuring its food.

The colour of the Kangaroo is a brownish grey on the back, but underneath it assumes a lighter tinge. The extremity of the muzzle, the feet, the back of the ear, and the upper part of the tail are nearly black; the throat is a greyish white; and the hair of a soft and silken texture.

The animals of which we are now treating were brought to this country from New Holland by Captain Bligh, and they appeared for some time to endure the climate of Cobham Hall with every expectation of their being eventually naturalized; from some cause, however, not yet ascertained, they died a few months after their portrait was taken, but some very fine specimens of them are still to be seen in the collection of his Majesty, at Windsor, and in some of the itinerant menageries.

THE STRIPED AND SPOTTED HYENAS

In the Royal Menagerie, Exeter Change

THE STRIPED AND SPOTTED HYÆNAS,

IN THE ROYAL MENAGERY AT THE TOWER OF LONDON.

THERE are few animals against which a stronger prejudice exists than against the Hyæna, for with it is associated the idea of the most revolting habits, the most untameable ferocity, and a truly repellent aspect, indicating peculiar gloominess and malignity of disposition. In its natural habits the striped Hyæna is an obscene and filthy animal; the graves of the dead are not secure from its rapacity, tearing from them their putrid masses, with which to satiate its disgusting appetite. It prowls about in the night to feed on the remains of dead animals, or on whatever living prey it can seize. The towns of Abyssinia swarm with them from evening till the dawn of day, in search of the different pieces of slaughtered carcasses, which the unfeeling natives are accustomed to expose in the streets without burial.

In size, the Hyæna resembles the wolf, but its body is more elevated in the front than behind, owing to its hinder legs being generally bent in a crouching posture. Its colour is of a pale-greyish brown, and marked by several irregular distant transverse blackish stripes, or bands, peculiarly distinct in the lower part, and becoming oblique towards the shoulders and haunches. The hair of its neck is erect, and is continued in a bristly mane along the back; the muzzle, the front of the neck, and the outsides of the ears being completely black. The head is broad and flat, and the eyes, which are not placed obliquely, have an expression of extreme wildness and ferocity. In the construction of its teeth it differs in no essential degree from the majority of carnivorous animals, each jaw having six cutting teeth and two canine. It has five molar teeth on each side of the upper jaw, and only four on the lower, which in comparison to those of the dog, possess an extraordinary degree of strength. The legs differ from those of all other animals in having but four toes, as well on the fore feet as the hinder, the claws of which are not retractile like those of the cat or the lion. Its tail is short, the hair of which, however, is rather long; and immediately under it, above the anus, is an opening into a kind of glandular pouch, which separates a substance of the consistence, but not of the odour of the Civet—on the contrary, it is highly offensive and disagreeable. The manner in which it holds its head possesses this peculiarity, that it is generally inclined to the ground, like that of the dog when following a scent; and it is this posture which may, probably, have led the ancients to believe that the Hyæna has no joint in its neck. Pliny and other naturalists concur in disseminating this error; and Lucan, in his Pharsalia, informs us, that this jointless neck possessed particular efficacy in all magical invocations. The neck of the Hyæna does, however, possess an unusual stiffness, on which account, when the animal looks behind it, or snatches obliquely at any object, it is obliged to move its whole body, similar to the motion of a Hog.

The striped Hyæna is a native of Barbary, Arabia, Persia, and many parts of Africa, in the interior of which they often enter the villages at night in herds of eight or ten, and often exceeding that number, and carry off with them whatever they can seize. They always assemble around a dead Camel or other animal, dragging it in consort to a considerable distance, where undisturbed they may satisfy their ravenous appetite.

There is a remarkable peculiarity in the Hyæna, which is, that when he is driven from his haunts, and compelled to run, he appears, for a considerable distance, to be lame; and to such a degree as to

induce his followers to believe that one of his legs is broken, but after running some time, this stiffness goes off, and he escapes with facility.

The animal, of which our engraving is a correct likeness, is a native of Africa, and is considered as one of the oldest members of the savage community in which he dwells. At the time when the drawing was taken, he had two spotted Hyænas with him in the same den, supposing from the similarity of their nature that concord might exist between them. On their first introduction, they shewed evident symptoms of fear, and crouched in the corners or ran into the den beneath, whenever their ferocious acquaintance, by his hideous yells or hostile motions, seemed determined to maintain the sovereignty of the den: by degrees, however, the fear of the animals subsided, and in their struggle for the bones, after having been stripped of the flesh, they often proved victorious. A continual state of warfare now ensued between the inmates of the den, and Darby, (the name of the striped Hyæna,) in one of his encounters, was injured in one of his legs. We were present when his den was opened, and the keeper succeeded in throwing a rope round his neck, and tying the animal fast to an iron ring, poured some vinegar on the wound; the natural ferocity of the animal was here exhibited in all its appalling features, and the spectators were fully impressed with a sense of the jeopardy in which their lives would be placed, were they at the mercy of so formidable a brute. The animals have since been separated.

The average height of the striped Hyæna is twenty-four inches; the length of the body from the muzzle to the tail about three feet, four inches.

The spotted Hyæna bears a strong resemblance to the former species, but is larger, and the body, instead of being marked with the transverse bands, is distinguished by numerous roundish black spots. Its general colour is a greyish brown. The face and upper part of the head are of a very dark colour, approaching to black, and a blackish mane extends along the neck, but is not so bristly as that of the striped Hyæna; its ears are short and broad, and of a circular form, which divests it of that sharp character so peculiar to animals with pointed ears. The spotted Hyæna is a native of the South of Africa, but particularly of the Cape of Good Hope, where they are described to be mischievous and formidable in the highest degree. They often enter the huts of the Hottentots in search of prey, and carry off the children whilst they are asleep. The striped and spotted Hyænas are never found to inhabit the same country, but their territorial boundary has never been distinctly ascertained.

A great number of these animals, excited by their rapacious appetite, penetrate into the interior of the towns in the vicinity of the Cape, and prowl about the shambles to carry off the filth and offal left there by the inhabitants, and in this work they meet with no molestation, on the contrary, they are considered, in some degree, as useful, in removing a nuisance, which if left to putrify might be productive of disease. We are informed by Thunberg, that they are so excessively bold and ravenous as sometimes to eat the saddle from under the traveller's head, and to gnaw the shoes on his feet while he is sleeping in the open air. Every kind of animal substance is eagerly devoured by them, and it has been argued that the rapacious habits of these animals appear to be a benevolent interference of Providence, in enabling them to consume those dead and putrid bodies, which the indolence or superstitious customs of the natives prevent them from burying.

During the night the air resounds with their horrid yells, but in the day-time they remain concealed in subterranean places, or in caves in the rocks. The sheep-folds are their favourite resort at night, in which they commit terrible ravages unless well defended by dogs. These animals were never known to live in a state of domestication, and in their savage state possess even a less degree of docility than the striped Hyæna.

THE DEMOISELLE, OR NUMIDIAN CRANE,

IN THE COLLECTION OF EARL DARNLEY, COBHAM-HALL, KENT.

The Demoiselle is one of the most beautiful species of the crane, or heron tribe, and is not often to be seen in the collections of this country. It is the Ardea virgo of Gmelin, the Numidian crane of Albinus, the Demoiselle of Numidia of Edwards, and the Demoiselle of Latham. It inhabits the eastern and western shores of Africa, Egypt, Numidia, Tripoli, the vicinity of the Caspian and Black Seas, and the Lake Baikal. Its length is about three feet, three inches; the bill greenish at the base, then yellowish, with the tip red. The irides are crimson; it has a tuft of long white feathers behind each eye, which hang downwards in a graceful manner. On the top of its head are long silky soft feathers, of a beautiful black, but the crown of its head is of an ashen colour. The upper part of the neck behind, and all the under part to the breast, are black; on the latter the feathers are long, and hang downwards to a considerable depth. The back, rump, and tail, and all the under part of the breast, are of a blueish-ash colour. The quills and tail are black at the ends, and the feathers of the latter fall in a drooping posture, which imparts to the motions of the bird an unusual degree of grace; indeed, from the elegance of its appearance, and its singular carriage, it has been called the Demoiselle, or the Young Lady, by the French, although we freely confess that, from the well-known gallantry of that people, we should not have expected them to have promulgated so severe a satire on the fair sex, which must be at once apparent when we compare the different characters which both ancients and moderns have bestowed upon this bird.

In the first place, can the following trait in the character of the demoiselle, as transmitted to us by Aristotle, bear any affinity with the character of a fair demoiselle of the present day? We are informed by that very acute naturalist, that the demoiselles are very fond of shewing themselves, and that when they observe that they are looked at, they make the most uncommon gestures, as if to excite a greater degree of attention. They are also frequently observed to dance opposite to one another, in which amusement they exert all their art to shew themselves off to the best advantage, and are frequently so lost in the enjoyment of this waltzing propensity as to be *very easily taken*. Aristotle further says, that the demoiselle is an excellent comedian, skilled in all sorts of grimaces and gesticulations, and certainly it must be allowed that, in those two properties of the comedian, the French are most decided proficients; but surely the French naturalists must never have read Aristotle, or they would have paused before they had given the name of demoiselle, or young lady, to a Numidian crane, unless fully convinced that a strong analogy did actually exist between the two beings.

If we turn to Xenophon we find the exact manner described in which the demoiselles, in his days, were caught, and we strongly opine that the French, in the christening of the bird, must have had a direct eye to the manner in which other demoiselles are caught, by a sort of perversion of vision, whereby they fancy they discern in particular objects certain charms and properties, that very often vanish altogether as soon as the bandage is removed by which the temporary blindness was occasioned. Xenophon thus describes the mode of catching these singular birds. Several persons repair to the haunts of the demoiselles, who, on their approach, appear at first very shy and timid, although it be evident by their gestures that they are all the while courting the admiration of their observers, who, having brought with them some vessels filled with water, proceed, without any

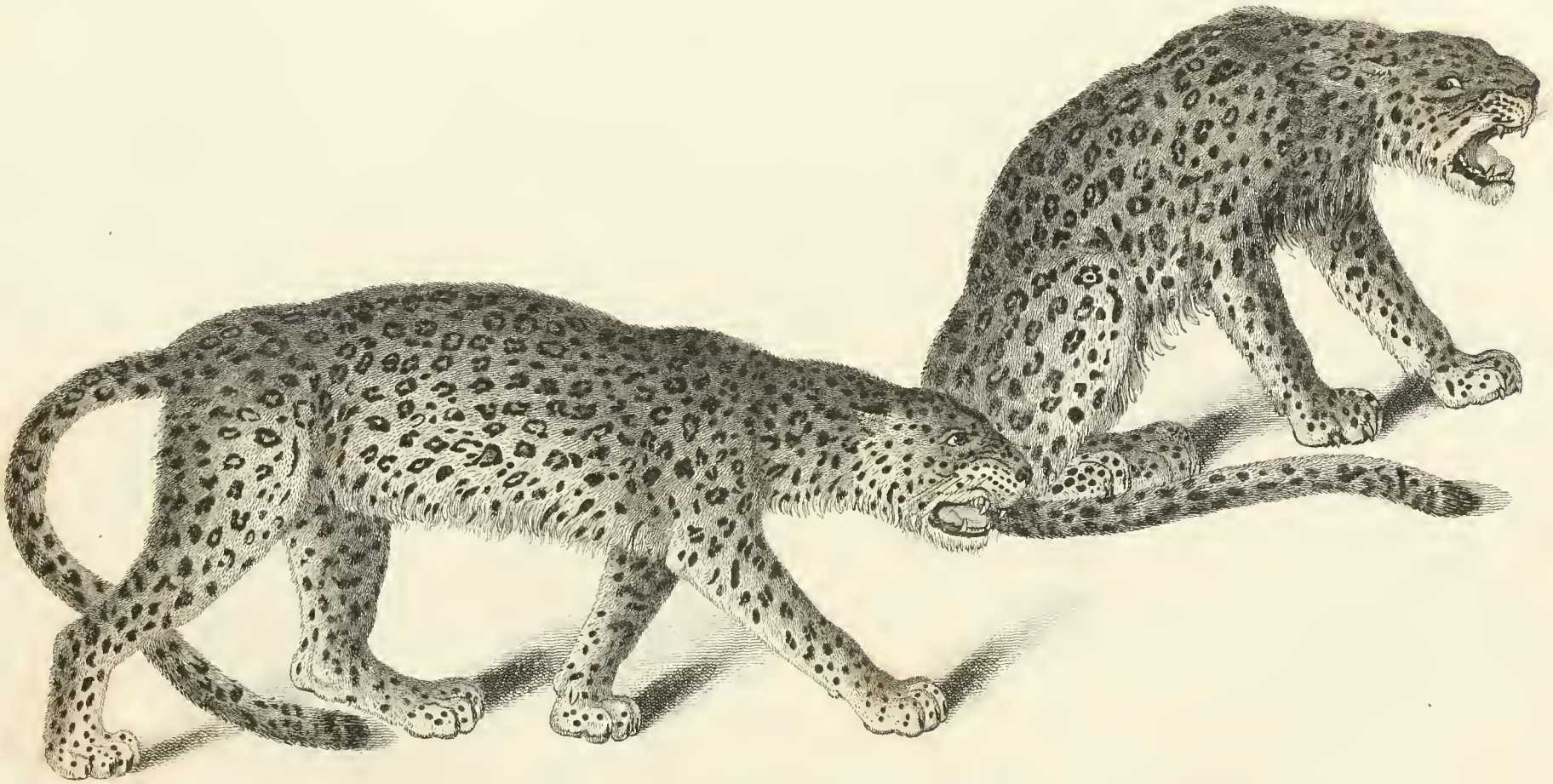
apparent design, to wash their eyes with the liquid. In the mean time, all their motions are strictly watched by the demoiselles, and one or two, who are often more forward than the rest, sometimes venture to approach very near to the spot where their future masters are pursuing their nefarious designs, the result of which is generally the loss of liberty and the future happiness of the too confident and unsuspecting demoiselles. Having secretly impregnated the water with a strong kind of glue, the men retire, and in ambush await the accomplishment of their plans. In a very short time, the demoiselles hasten to the spot where the vessels of water have been left, and proceed to wash their eyes in the same manner as they had seen performed by their artful enemies. The result is obvious, the gluey mixture prevents the bird from opening its eyes—the deception is discovered when it is too late, and the unfortunate demoiselles are borne away in triumph. The worthy Grecian also informs us that the demoiselle very much resembles the monkey in the imitative arts, of which he quotes the washing of the eyes as an example; but he proceeds further to state, that if any particular demoiselle dresses *her feathers* in a particular style, a kind of fashionable rage takes place immediately throughout the whole community, and every other demoiselle instantly evinces an unconquerable desire to have her feathers dressed in the same manner. In this respect did the French nauralists discover any analogy between the demoiselle of Paris, and the demoiselle of Numidia?

If we consult Pliny on the character of the demoiselle, we find that he declares it to be a most accomplished parasite; that the peacock exceeds it not in vanity, and that although it professes to live in a state of connubial union, yet the most aggravated instances of infidelity are daily exhibited. This trait in the character of the demoiselle of Pliny cannot possibly apply, in even a remote degree, to either the demoiselles of Paris or of London, and therefore we repeat that the French are decidedly wrong in giving the name of demoiselle to the Numidian crane.

Keysler further informs us, that he has known a demoiselle which was taught to dance, and that it was surprising the exactness with which it kept the time; it was, however, guilty sometimes of making some very false steps, which again shews the absurdity which the French have committed, in giving the name of demoiselle, or young lady, to this bird.

We have now only another authority to quote, and, in some respects, we prefer it to any which has ever been established by the greatest naturalist which France or any other country ever produced, and that is, the authority of an English sailor. He has not, indeed, entered so deeply into the minutiæ of the dancing art, nor is he so well versed in grimaces and gesticulations as our more polished neighbours; he sees neither elegance nor grace in the attitudes of the demoiselle, and therefore by him it is always called the Buffoon Bird. He considers its antics as highly ridiculous and laughable, and that all its attempts to excite admiration only render it contemptible.

The bird, of which our portrait is a most faithful likeness, has now no one to please with its gestures but some fan-tailed pigeons, which share its habitation in a rustic house in the grounds at Cobham-Hall, and the labourers employed in the gardens, to one of whom the bird appears to shew a decided attachment. When he is at work in the vicinity of the house, the demoiselle will be his companion, jumping and dancing about him, and picking up any worms or insects which may shew themselves on the surface of the ground. Its general food is wheat; but when we consider that the natural haunt of the demoiselle is in marshy places, and the neighbourhood of rivers, like most of the heron genus, it is more probable that fish is its natural food; and as there were originally a pair, male and female, it is perhaps not an erroneous conjecture, that the death of one of them was occasioned by the food not being suited to its general habits and constitution.



THE LEOPARD.

In the Royal Menagery

THE LEOPARDS,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

It is in the recesses of the African deserts, from the Mediterranean to the Cape, and in the eastern districts of Asia, that the Leopard, this formidable and ferocious animal, disputes with the lion the sovereignty of its domain, and renders itself an object of continual terror and alarm to the human race. The timid Hindoo, on his devotional pilgrimages, dreads in every jungle to espy the crouching animal, fearing that he may soon fall an easy victim to its fatal spring; whilst in the burning deserts of Africa, it pursues its sanguinary habits far from the haunts of men, and gorges itself with the blood of every defenceless creature that it meets with in its track. In those vast, unpeopled regions, the Leopard may vary in some degree in the brighter or fainter shades of its colouring, as well as in its powers and magnitude, but in its essential characteristics it universally presents the same ferocious disposition and sanguinary pursuits.

The panther and the Leopard have frequently been confounded, but they may be generally distinguished by the form of the spots; those of the panther having usually a central spot in each circle, while in the Leopard it is seldom to be observed. The distinction is, however, not without exception, and the animals are better distinguished by their general shade of colours and their size; the panther being of a darker colour, and larger than the Leopard: nevertheless, this distinction is by no means strongly marked, and they can only be considered as varieties of the same species. In manners and dispositions the Leopard nearly resembles the tiger, but the Leopard is generally considered as less fierce than the panther.

The colour of the Leopard is a yellowish fawn on the upper part of the body, becoming gradually paler on the sides, whilst the under part of the body is a pure white. The sides and back of the animal exhibit numerous distinct roses, formed by the near approach of three or four elongated small black spots, surrounding a central area about an inch or an inch and a half in breadth, partaking rather of a deeper colour than the ground on which it is placed. The head, the neck, the top of the back, and the lower surface of the body, are covered in an irregular manner with black spots, some larger, some smaller, and either oval or circular.

In speaking of this formidable animal, Mr. Bennett very justly observes, that the Leopard, equally savage and dastardly, closely imitates the manners of the lion and the tiger in a somewhat reduced but still formidable scale. Antelopes, monkeys, and the smaller quadrupeds, constitute his usual prey, upon which he darts forth from his secret stand, and which he pertinaciously pursues even upon the trees where they may have taken refuge, climbing after them with surprising agility. The Leopard generally endeavours, if possible, to avoid man; but, when hard pressed by hunger, he fears not to make head against the hunter, and it frequently requires the exertion of no common share of skill and intrepidity in the latter to save himself from the deadly fangs of the infuriated object of his pursuit. Occasionally, indeed, the cravings of hunger stimulate the treacherous animal to attack the unwary wood-cutter, or the lone traveller, whose path has led to his secret haunts; ut in this case he rarely, if ever, shews himself openly in the face of day, but watches, with insidious glare, for the fatal opportunity of springing upon his wretched victim from behind, and of annihilating his power of resistance before it could possibly be exerted in his defence.

The animals from which our drawing is taken are natives of Asia; and the female, which is the

elder of the two, has now been an inmate of the Tower above four years. Long confinement has softened the natural ferocity of her disposition; and it is said that she will allow herself to be patted and caressed by strangers. From the natural treachery of the animal it is, however, an experiment by no means to be recommended to be put in practice, for, on our visit to her den, we have had frequent opportunities of remarking the sly and instantaneous manner in which she will dart her fangs at anything within her reach. If a lady or gentleman point at her with either an umbrella or a parasol, the chances are very much against it, that it will be ever fit for any future use. According to the report of Mr. Cops, the keeper of the menagery, whose general civility and liberality deserve particular notice, he declares it to be his firm belief, that the Leopardess has destroyed more umbrellas and parasols than there are days in the year. Hats and muffs also come within the range of her destructive powers, and in several instances the head itself has narrowly escaped some deep lacerations from her tremendous claws.

The male Leopard differs very much from the female in point of tameness and docility. He is, perhaps, one of the most sullen beasts in the whole menagery, and all the kindness of his keepers appears to be thrown away upon him. He seldom exhibits himself in the upper den except at feeding time, crouching in his dismal den beneath, and refusing all familiarity with any of the attendants of the place. In his size and depth of colouring he surpasses the female, with whom, however, he condescends to live on tolerably friendly terms, quarrelling only with her when he supposes that she has had a larger portion of food bestowed upon her than upon himself, and consequently manifests a greedy disposition to deprive her of her allotted share.

It is most surprising to observe the agility with which the female bounds round her den, touching at one spring each of its four walls, and skimming along the ceiling with the same rapidity of action, which the eye can scarcely follow. This feat of the animal displays, in a wonderful manner, the extraordinary muscular power and flexibility of limb which it possesses, and conveys to the spectator some adequate idea of the extent of its powers when employed in its state of savage nature.

Kolben relates that, in the year 1708, a male and female leopard, with three young ones, entered a sheepfold at the Cape. They killed nearly a hundred sheep, and regaled themselves with the blood. When the old ones were satiated, they tore a carcass into three pieces, and gave one of these to each of their offspring. They then took each a whole sheep, and, thus laden, began to move off. Having, however, been observed, they were waylaid on their return, and the female and three young ones were killed, but the male effected his escape. We are informed by the same traveller, that the Leopard will not eat carrion, nor deign to touch what has been killed by any other beast.

We rather suspect that our modern Epicureans would not relish a dish of leopard cutlets, but Kolben informs us that the flesh of the Leopard is white and well-tasted, and eats much better than the finest veal. "It is," he says, "both nourishing and delicious, and the flesh of a young Leopard is as tender as chicken!"

The whole race of the leopard, the panther, and the tiger, may be considered as the most formidable enemy of mankind; there are others, indeed, stronger, but they are more gentle, and never inflict any injury till they are themselves injured; there are others more numerous, but they are more feeble, and rather seek their safety by concealing themselves from man, than by opposing him. These are the only quadrupeds that make good their ground against him, and which may be said to keep some kingdoms of the earth in their own possession. There are extensive countries in Africa where the wild beasts are so numerous, that man is deterred from living amongst them, reluctantly yielding to the lion and the leopard those tracts, which nature appears to have formed solely for his delight and convenience.

THE CAMELEOPARD, OR GIRAFFE,

IN HIS MAJESTY'S COLLECTION AT THE SAND-PITS, WINDSOR.

This most singular and extraordinary quadruped, which has been seldom known to breathe the European air, now treads, far from its native habitat, the beautiful domain of Windsor, the gaze and admiration of the accidental visiter, or the professed zoologist. In its state of comparative confinement, it appears to have lost many of those characteristic traits which are said to distinguish it in its natural condition; but, notwithstanding this difference, it still presents one of the most beautiful specimens of the wonders of the animal kingdom. In regard to the testimony of ancient authors respecting the Giraffe, Moses is the first who speaks of it; Aristotle does not mention it, from which it is inferred that it was unknown to the Greeks. In the year 708 of Rome, Julius Cæsar brought one to Europe, and the Roman emperors afterwards exhibited them at Rome, either in the games in the Circus, or in their triumphs over the African princes. Albertus Magnus, in his treatise *de Animalibus*, is the first modern author who speaks of the Giraffe. In 1486, one of the Medici family possessed one at Florence, where it lived for a considerable time. The name *Camelo-pardalis* (Cameleopard) was given by the Romans to this animal, from a fancied combination of the camel and the leopard; but its ancient denomination was *Zurapha*, from which the name *Giraffe* has been adopted.

The difficulties which attended the transportation of his Majesty's Giraffe to this country are such as almost to exceed the bounds of credibility; after traversing a desert region of 1200 miles, its further transportation was despaired of, owing to the extreme fatigue which the animal endured, and the difficulty which was experienced in procuring the food congenial to its nature. The laborious task was at length accomplished by placing it on the backs of camels; and since its domestication in this country, many points in its natural history have been verified, which were previously enveloped in doubt.

In its native country, the Giraffe browses on the twigs of trees, preferring plants of the mimosa genus; but it appears that it can, without inconvenience, subsist on other vegetable food. The animal now at Windsor, from its having been accustomed in early life to the food prepared by the Arabs for their camels, is fed on mixed grain bruised, such as maize, barley, &c., and it is furnished with milk for its beverage every night and morning. The animal which was kept at Florence fed on the fruits of the country, and chiefly on apples, which it begged from the inhabitants of the first stories of the houses. In the same manner the animal at Windsor willingly accepts fruits and branches of the acacia, which are presented to it. It seizes the leaves with its long, rugose, and narrow tongue by rolling it about them, and appears to be annoyed when it is obliged to take anything from the ground, which it seems to perform with difficulty. To accomplish this act, it stretches first one, then the other of its long fore-legs asunder, and it is not till after repeated attempts that it is able to seize the object with its lips and tongue.

The pace of the Cameleopard is an amble, though, when pursued, it flies with extreme rapidity; but the small size of its lungs prevents it from supporting a lengthened chase. It defends itself against

the lion, its principal enemy, with its fore-feet, with which it strikes with such force as often to repulse it.

When the Giraffe stands erect, its height from the ground to the top of the head is in adults from sixteen to eighteen feet. Its length is very disproportioned to its height, being only about six feet, measured in a direct line from the front of the breast to the point whence the tail issues. The fore end, measured from the ground to the top of the shoulders, is about ten feet, whilst the hinder part measures only about eight feet and a half. It has been erroneously considered that the difference in the height which exists between the front and hinder part of the Giraffe proceeds from the inequality in the height of the legs, but it has been now ascertained, and it is discernible in the skeleton of the animal which is preserved in the Museum at Leyden, that the bones of the front and hinder legs are nearly equal in their height, and that the inequality proceeds from the size of the scapula and the spinal processes of the vertebræ of the back. The bone of the scapula is two feet in length, and the first spinal process is above a foot in length, which accounts for the fore part of the animal being about twenty inches higher than the hinder part.

The skin of the Cameleopard is studded with spots of a ruddy or deep yellow colour on a dirty-whitish ground. These spots are very close to each other, and vary in their figure, being sometimes oval, rhomboidal, and even sometimes round. The colour of these spots is not so deep in the females and in the young males, as in the adults; and as the animal increases in age, these spots become of a browner tinge, sometimes bordering on a black.

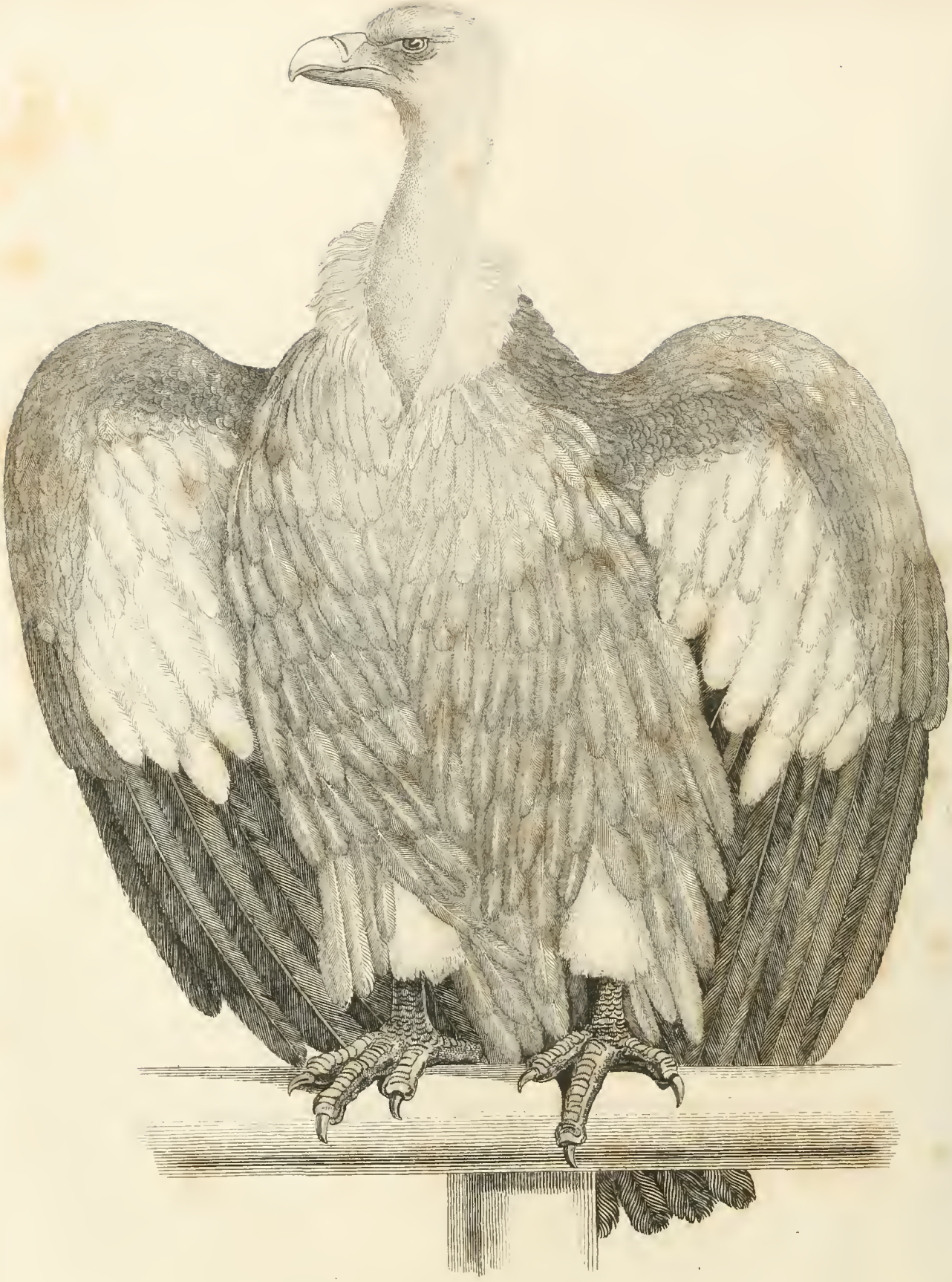
The form of the head of the Giraffe bears some resemblance to that of the sheep; its length being about two feet. The brain is very small. The upper lip projects over the lower about two inches. It has eight incisors in the lower jaw, and, like all other ruminating animals, has no teeth in the upper jaw.

The Giraffe has two horns on the top of the head, inclining rather backwards, but they are not cast annually like those of the deer; on the contrary, they are an excrescence of the bone of the head, of which they form a part, and from which they project about seven inches. Their circumference at the base is about nine inches, and their extremity is terminated by a kind of large hairy knob. The ears are about nine inches in length, between which and the horns two protuberances are apparent, composed of glands of considerable bulk.

According to all the comparisons which have been instituted between the males and females in regard to colour or form, no essential difference exists. In size, however, a decided distinction is manifest, the females being always smaller than the males. The females have four teats, although they very seldom produce more than one young one at a birth. The eyes of the Cameleopard are large and bright, the greatest diameter of which is about two inches and a half, and the eyelids are furnished with long and stiff hairs in the form of eyelashes. The eyes have no suborbital sinus. In disposition, the Cameleopard is mild and gentle, and it is believed that it is possible to domesticate it, but the experiment has never yet succeeded.

The Giraffe always inhabits the plains, appearing in small groupes of five or six, and sometimes ten or twelve. The species, however, is not very numerous. When they repose, they lie on their belly, which accounts for the callosities at the bottom of their breast and the joints of their legs.

His Majesty's Giraffe still carries round its neck the amulet, enclosed in a small black bag, which was placed by the Arabs, and which contains some mystical inscription, which that superstitious people believe protects the animal from sickness and death. The amulet, however, must have lost its efficacy, as the animal is evidently on the decline; but is the especial command of his Majesty, that the amulet shall not be removed.



THE GRIFFON VULTURE,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The character which principally distinguishes birds of the vulture tribe from the eagles and falcons is the want of feathers on part of the head, and sometimes even on the whole head and neck; they are also distinguished by their voracious manners, as they never kill prey from *choice*, but in general devour only such animals as are either dying, or are found dead and putrid. "They are," says Mr. Pennant, "greedy and voracious to a proverb, and not timid, for they prey in the midst of cities, undaunted by mankind." After some of the battles of the East, where vast slaughter takes place of elephants, horses, and men, voracious animals crowd to the field from all quarters; and of these, jackals, hyænas, and vultures are the chief. Even in the places where the latter are otherwise seldom observed, the plain will on such occasions be found covered with them. Vast multitudes will be seen in the air, descending from every side, to partake of the carnage. It is the belief of the Indians, that the vultures are brought to the place by an instinctive presentiment of slaughter some days before the event.

It is observed that vultures in general become less numerous as the climate becomes colder, and that they are never found in the more northern countries. Their presence appears to be a kind disposition of Providence in the hotter regions, to prevent the putrid effluvia of the dead from too much injuring the health of the living.

Although the field of battle affords the greatest latitude for the indulgence of their disgusting appetites, and on which they congregate in the greatest number, it is, nevertheless, fortunately of rare occurrence, and consequently their usual subsistence is obtained from the bodies of dead animals. Their sense of smelling is so acute, that they are able to scent a dead body at the distance of many miles, and they sometimes crowd to it in such numbers as actually to cover the object of their attack, from which they tear the flesh in large pieces, and swallow them entire with an appetite truly voracious. It is only when they are impelled by extreme hunger, that they venture to attack a living creature, and when that is the case, the innocent inhabitants of the dove-cot, or of the poultry-yard, are their chosen victims. It is an erroneous idea, that the vulture carries off its food in its talons, for it is uniformly devoured on the spot, and even the food with which they rear their young is first swallowed and then disgorged into the nest.

The vultures have their bill straight, and hooked only at the end; its edges are sharp, like a knife, and the base is covered with a thin skin. The most remarkable of their external characters is the want of plumage on the head and neck, which in the greater number of the species are covered by nothing more than a kind of down, or by short smooth hairs. The tongue is large, fleshy, and cleft at the end; the legs and feet are covered with great scales, and the first joint of the middle toe is connected to that of the outermost by a strong membrane. The claws are large, somewhat hooked and very blunt, and they are consequently unable to grasp their prey with sufficient force to transport it through the air; their eyes are placed on a level with their cheeks; their heads are rounded at the top, and they have frequently a ruff of considerable extent round the lower part of their neck.

The Griffon Vulture is almost equal in size to the larger species of eagle; the plumage is a reddish

grey ; the feathers of the wings and tail are of a blackish brown ; the beak and claws are nearly black. Africa, Asia, and the greater part of the south of Europe, may be considered as the natural habitation of the Vulture ; during the summer, it inhabits the more elevated regions, and builds its nest in the rocks, and amongst the most inaccessible precipices. During the winter it migrates to warmer climates, stretching its flight as far as the southern countries of Africa.

In some of the countries bordering on the torrid zone, these birds haunt the towns and villages in immense multitudes. In Carthagena, the carrion vulture may be seen sitting on the roofs of the houses, or even stalking along the streets. They are, however, in that place, of infinite service to the inhabitants, by devouring that filth which otherwise, by its intolerable stench, would render the climate still more unwholesome than it naturally is. When they find no food in the cities, they seek for it amongst the cattle of the adjoining pastures. If any animal be unfortunate enough to have a sore on its back, they instantly alight on it and attack the part affected. The unhappy beast may in vain attempt to free itself from the gripe of their talons ; even rolling on the ground is of no effect, for the vultures never quit their hold till they have completed its destruction.

In few creatures are the designs of Providence more clearly developed than in the vulture tribe. Filthy as they are in their manners, their appearance and their smell, yet this filthiness is even a blessing to mankind. In hot climates, where putridity takes place in a few hours after death, what might not be the effects of the aggregated stench, if it were not for the exertion of birds of this description ! But in some countries, they are rendered even of still greater importance to mankind, by destroying the eggs of the alligator, an animal which otherwise must become intolerable by its prodigious increase. They watch the female crocodile in the act of depositing her eggs in the sand, and no sooner does she retire into the water, than they dart to the spot, and feast upon the contents of the eggs.

In Egypt the vulture appears to be of singular service. In the neighbourhood of Grand Cairo, there are great flocks of them, which no person is permitted to destroy. The service which they render the inhabitants is the devouring of the carrion and filth of that great city, which otherwise would have a tendency to corrupt and putrefy the air. They are commonly seen in company with the wild dogs of the country, tearing a carcase very deliberately together. This odd association, however, is not productive of any quarrels ; the birds and the quadrupeds appear to live amicably, and nothing but harmony subsists between them. The wonder is still the greater, as both are extremely rapacious, and at the same time lean and bony to a very great degree, which probably arises from a scarcity even of the wretched food on which they subsist.

In Kolben's travels in Africa, speaking of the vultures in the vicinity of the Cape of Good Hope, he says, " I have often been a spectator of the manner in which they have anatomized a dead body ; I say anatomized, for no artist in the world could have done it more cleanly. They have a wonderful method of separating the flesh from the bones, and yet leaving the skin quite entire. Their manner of performing the operation is as follows :—they first make an opening in the belly of the animal, from which they pluck out and greedily devour the entrails ; then entering into the hollow which they have made, they separate the flesh from the bones, without ever touching the skin.

The vultures, at least those of Europe, generally lay two eggs at a time, and produce but once a year. They make their nests in inaccessible cliffs, and in places so remote, that it is difficult to find them. Those in our part of the world chiefly reside in the places where they breed, and seldom come down into the plains, except when the snow and ice in their native retreats have banished all living animals but themselves. As carrion is not found at those seasons in sufficient quantity or sufficiently remote from man to sustain them, they prey upon rabbits, hares, serpents, and whatever small game they can overtake or overpower.

THE LLAMAS,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The Llama is a native of the lofty and mountainous regions of Peru, Chili, and other districts of South America. It is about four feet and a half in height, and in length, from the neck to the tail, nearly six feet. The back is nearly even, and exhibits no traces of that unsightly hump, which disfigures the back of the camel, to which animal, in many characteristics, it bears a strong resemblance: indeed it may be generally considered as the camel of the New World, performing the different services of that animal, but possessing a greater degree of utility in a commercial point of view, owing to the length and fineness of its wool. In the Spanish settlements, before the introduction of mules, the Llama was employed in the ploughing of land, and in general it is in its nature so mild, gentle and tractable, as to be employed in many parts of those countries for the transportation of burthens. Like the camel, it lies down to be loaded; but when it is wearied, no blows will induce it to proceed; its disposition is, however, so capricious, that sometimes when it is struck, it will lie down, and caresses only will induce it again to rise. There is, however, one peculiarity attached to the Llama, which detracts considerably from its merits, in comparison to the horse or the ass, which is, that it cannot be induced to travel by night; but this deficiency is not much regretted by the natives, as their own natural laziness prevents them from undertaking any nocturnal labour.

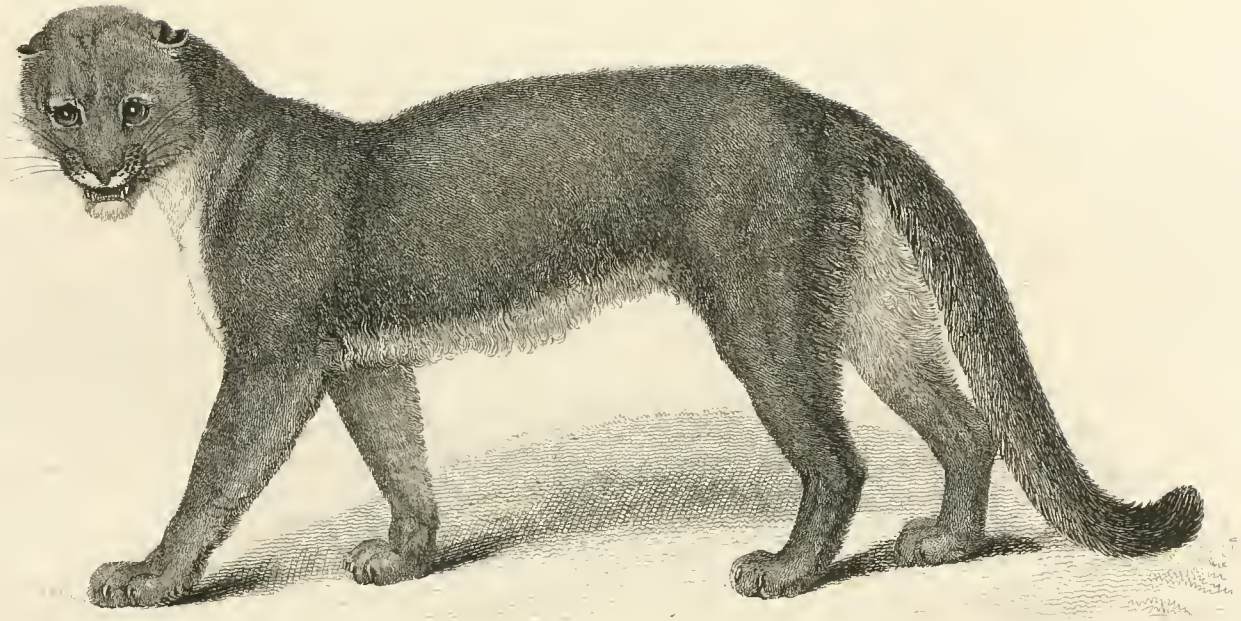
Llamas are generally employed in transporting the rich ores out of the mines of Potosi. In these journies, they will sometimes travel four or five days successively before they seem desirous of repose, and they then rest spontaneously twenty or thirty hours before they resume their labour. Sometimes when they are inclined to rest a few minutes only, they bend their knees and lower their body with great care, to prevent their load falling off, or being in any degree deranged: when, however, they hear their conductor's whistle, they rise with equal caution, and proceed on their journey. In travelling during the day-time, they browse wherever they find any herbage, and generally spend the night in chewing the cud. The weight, however, which a Llama can carry is not very great, not exceeding that which is borne by an European ass; its gait is neither a trot nor a gallop, but so exceedingly gentle, that the women prefer the Llama to every other animal for riding. They are pastured in the open fields like the other domestic animals, and never make any attempt to escape. Their wool is applied to the same purposes as horse hair in this country, although it is as soft as silk, and as fine as the wool of our sheep; the animal is generally shorn once a year, commonly about the end of June: the wool, however, has a very strong and disagreeable odour, which the natives have not yet discovered the art of removing.

The Llama is a ruminating animal, but it presents this singularity, that, differing from all other ruminants, it has six molar teeth in the upper jaw, and five in the lower; it has also six incisors in the lower jaw, and two in the upper, and two canines in each. The nostrils of the Llama consist of a mere fissure in the skin, which is opened and shut at pleasure; and the lips are thick, the upper one divided, and the lower rather depending: they are capable of being opened to a great extent, and possess a considerable degree of separate motion. The ears are about four inches long, are sharp and pointed, and move with great agility; the colour is a greyish mouse, and the outside of the legs is

of the same colour as the sides of the body, but the throat approximates more closely to the white. Its neck is long and covered with wool, and as its head is always held in an erect position, the animal has an air of nobleness and lightness which nature has refused to the camel. The feet are divided into two toes; the horn of each toe is about an inch and a half long, black and smooth, rounded externally, but flat underneath; the fore knees are remarkable for their thickness, whilst in the hinder legs, about the middle, there is a cavity under the skin of about the depth of two inches.

Although the Llama is not to be compared to the camel in point of size, strength, or perseverance, yet the Americans find a substitute in it, with which they seem to be highly satisfied. It indeed appears to be formed for that indolent race of masters whom it is obliged to serve, and who have actually reduced it from its wild and savage state, to one of subjection and domestication. It is one of those animals on which the change of climate appears to have no visible effect, prospering and breeding equally in a hot as in a cold climate: for, being naturally provided with a warm covering, it does not require to be housed, and being satisfied with vegetables and grass, it requires for its subsistence neither corn nor hay. It exceeds the camel in temperance, particularly in drink, it having been known to live eighteen months without any water: in fact, of all animals, it appears to require water the least, being supplied by nature with saliva in so large a quantity, that it spits it out on every occasion, and particularly when it is offended; this saliva seems to be the only offensive weapon with which this harmless creature is invested to testify its resentment. When it is overloaded or fatigued, or impelled by all the torturing arts of its keeper, it falls on its belly, and pours out against him a quantity of this fluid, of which the Indians in general are very much afraid, as they assert that it is of a very acrimonious nature, either burning the skin, or causing very dangerous eruptions. The animals from which our drawing is taken, and which are now confined in the Zoological Gardens, are exceedingly partial to carrots; if a root be given to them, and an attempt be made to take it from them, their anger immediately rises, and they eject their saliva with the greatest vehemence, covering a surface of three or four yards in extent. The noxious quality of the saliva is denied by Bingley, who says that when the Llama was exhibited in Piccadilly in 1805, he had the saliva thrown on his hand, and the keeper informed him that he had had it frequently thrown into his face, without experiencing any injurious effects; that it is wholly innocuous cannot, however, be admitted on rational grounds, for as it is evidently given to the animal as a means of defence and annoyance, it must be necessarily invested with some properties of a repellant and corrosive nature.

When the Llamas are amongst their native mountains, they associate in immense herds on the highest and steepest parts. Here they frequently climb rocks, along which no man has the temerity to follow them, and while the remainder are quietly feeding, one of them is always stationed as a sentinel on the point of some adjacent rock. When this animal observes any one approaching, it gives a kind of neigh, and the herd, taking the alarm, run off with incredible speed. They gallop to a considerable distance, then stop, turn round and gaze at their pursuers till they come near, and immediately set off again. They outrun all the dogs, so that the natives have no other mode of killing them than with guns.



THE PUMA

In the Royal Menagery Tower of London

THE PUMA,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

This animal has, by the natives of Peru and Chili, been denominated the Lion of South America; and in its colour and general characteristics it bears a strong resemblance to that animal, with this exception, that the male Puma is wholly destitute of mane. The length of the body of the Puma is about five feet, and its height two feet and a half; its tail is about three feet long, just sufficient to let the extremity of it touch the ground. The head is remarkably short and rounded, with the muzzle rather broad; the hair on the head is an irregular mixture of grey and black: the general colour of the body is a bright silver fawn; the throat, chin and upper lip are almost completely white, as well as the inside of the limbs and the lower part of the belly.

The whole of the western hemisphere may be considered as the natural domicile of the Puma, as it has been found in Canada and the northern countries of the United States, and as far south as Patagonia. The character of the animal, however, in regard to ferocity appears strikingly different, in proportion as we proceed from the northern latitudes to the tropical climates, for, in the former, many instances have occurred of the Puma being tamed, and actually living in a state of comparative docility, as the companion and attendant of man; but in the latter the ferocious and sanguinary disposition of the animal exhibits itself in its fullest force, and renders it an object of terror to the natives of those countries where it has established its haunts. The rapid advances, however, which civilization has made in the northern states of America have naturally led to the gradual diminution and extinction of the tribes of ferocious animals, and the Puma may now be considered as nearly expelled the northern American states, whilst it continues to pursue its sanguinary career in the deep recesses and unfrequented jungles of the southern continent. There, in the most impervious forests, and mountains almost inaccessible, it makes its predatory incursions into the plains, for the purpose of attacking the domestic animals, particularly the horse, to whose flesh it appears to give the preference before that of every other animal. In its habits, the Puma is generally characterized by the meanest cowardice, for notwithstanding its greater magnitude and the extent of its muscular power, it seldom attacks any animals which are able to compete with it, or over which it is not certain of the victory. In the manner in which it seizes its prey, it bears a strong resemblance to the domestic cat: it approaches its victim by crawling along upon its belly, gliding gently through the shrubs and bushes, and concealing itself in the ditches; or, if it show itself, it assumes a mild and fawning appearance, but during the whole of these manœuvres it is only watching a favourable opportunity to seize the animal which it has marked out for its victim; which having done, at one leap it fastens itself on the back of its prey, and in a few minutes tears it to pieces. Having satiated its thirst with the blood, and devoured the flesh of the breast, it carries the remainder of the carcase into the nearest wood, where it conceals it with leaves and boughs of trees, in order to devour it at its leisure. The natural cowardice of the animal is, however, connected with an unusual degree of ferocity, scarcely to be equalled by any of the more powerful species of its tribe. The thirst of blood is so great in this animal, that, unlike other creatures of the same species, it is not content with a single victim: for if a flock of sheep be left without a guardian, and a Puma should unfortunately come amongst them, it has been known

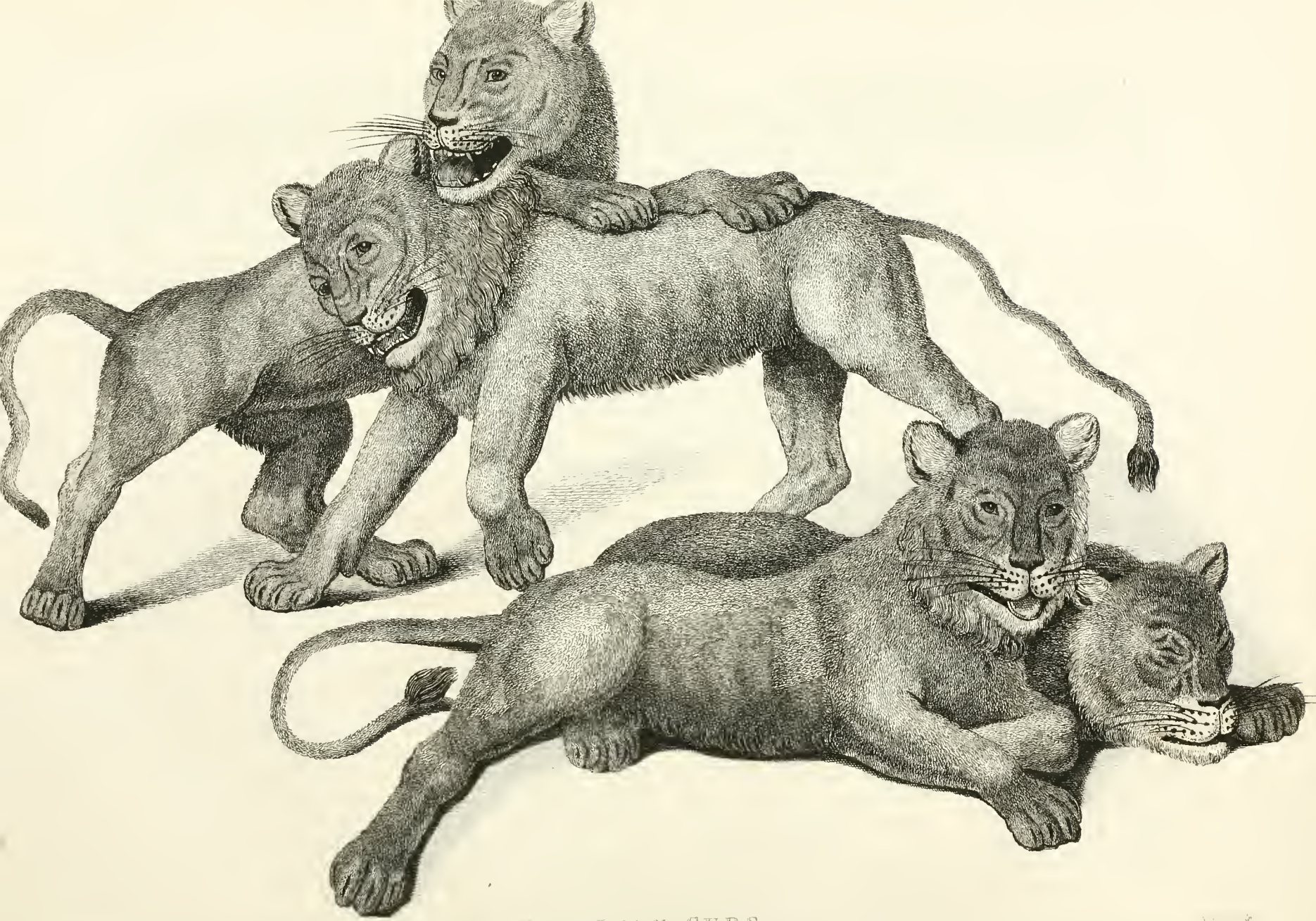
to destroy every individual in the flock, actually gorging itself with the blood, and in this bloated state it often falls a prey to the hunter. The appearance of even a woman or a child is sometimes sufficient to make him fly and abandon his prey; and when hard pressed, he either leaps upon a tree, seeks an asylum in a rock, or, placing himself against the trunk of some large tree, defends himself in a furious manner.

We are informed by Molina, that it is a common practice for the husbandmen of Chili to fasten two of their horses together in the fields, and whenever the Puma finds them in this situation, it kills one and drags it away, compelling the other to follow by striking it from time to time with its paw. The favourite haunts of the Puma are the streams to which animals usually repair to drink; it here conceals itself upon a tree, and scarcely ever fails of seizing one of them. The horses, however, have an instinctive dread of these places, and even when pressed by thirst, they approach them with great caution, carefully examining on every side, to discover if there be any danger. The ass in particular, when the Puma leaps on its back, throws itself immediately on the ground, or runs with all its force against the trunks of trees, endeavouring thereby to free itself from its desperate assailant.

The enterprising spirit of modern travellers has greatly enriched our knowledge of the natural history of foreign quadrupeds, particularly those which may be considered as exclusively belonging to the New World; the majestic condur, whose aërie is on the Andes, and the alpaca who feeds on the plains at their base, are now as familiar to us as the lion of Senegal, or the tiger of the Indies. The journey of Capt. Head across the Pampas has furnished us with an interesting anecdote respecting the Puma, although it must be observed that he has fallen into the error common with Humboldt and other travellers, of calling the Puma a lion.

He relates "that the fear which all wild animals in America have of man, is very singularly seen in the Pampas: I often rode towards the ostriches and llamas, crouching under the opposite side of my horse's neck; but I always found that, although they would allow any loose horse to approach them, they, even when young, ran from me, though little of my figure was visible; and when one saw them all enjoying themselves in such full liberty, it was at first not pleasing to observe that one's appearance was everywhere a signal that they should fly from their enemy; yet it is by this fear 'that man hath dominion over the beasts of the field,' and there is no animal in South America, that does not acknowledge this instinctive feeling. As a singular proof of the above and of the difference between the wild beasts of America and of the Old World, I will venture to relate a circumstance which a man sincerely assured me had happened to him in South America.

"He was trying to shoot some wild ducks, and in order to approach them unperceived, he put the corner of his poncho (which is a sort of long, narrow blanket) over his head, and crawling along the ground upon his hands and knees, the poncho not only covered his body, but trailed along the ground behind him. As he was thus creeping by a large bush of reeds, he heard a loud sudden noise between a bark and a roar; he felt something heavy strike his feet, and instantly jumping up, he saw to his astonishment a large lion, actually standing on his poncho, and perhaps the animal was equally astonished to find himself in the immediate presence of so athletic a man. The man told me he was unwilling to fire, as his gun was loaded with very small shot, and he therefore remained motionless, the lion standing on his poncho for many seconds; at last the creature turned his head and walked very slowly away about ten yards; he stopped and turned again, the man still maintained his ground, upon which the lion tacitly acknowledged his supremacy, and walked off."



THE LION CUBS

In the Royal Menagery Tower of London

THE LION CUBS,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

It is a curious phenomenon in the animal world, when we observe the most ferocious beasts of the desert breeding and rearing their young in the contracted and cheerless den of a menagery, in which it might be supposed that their natural propensities would be so much checked and diverted, as to render them callous to those feelings by which they are so powerfully governed in their savage state. Numerous instances, however, have of late occurred, in which propagation has taken place in the menageries of this country amongst animals, not only in their nature of the most ferocious disposition, but even in their species wholly dissimilar. We have already noticed the extraordinary procreation of the lion and the tigress. Atkins has at the present time a litter of tiger whelps; and Wombwell has a she-wolf of the Alps suckling her young, the father of which is a dog of Hudson's Bay. It must be confessed that these are interesting subjects to the zoologist; for, from some of these discordant unions brought about by the mere caprice and curiosity of man, arises the important question, whether nature, having been thus diverted from her usual track, will allow the new species to perpetuate their kind; or whether, in her indignation at the trespass on her established laws, she will not visit them with the same punishment as she has hitherto inflicted on all animals and birds which are not bred in the regular course of their species. The solution of this question, as far as regards the lion-tigers, will open a vast field for philosophical research, and may give rise to some most curious speculative disquisitions as to the actual origin of many of the animals, which we consider at the time to be a distinct species, but which may ultimately be found to be the produce of an accidental, but unnatural union of two animals belonging to the same genus, although wholly dissimilar in the species.

In the case of the lion cubs, they are not all the produce of one litter, two being whelped at one time, and three at another; but one of the latter died, and the survivors now form one of the most interesting groups in the Menagery of the Tower. The sire is of the Asiatic breed, the mother of the African; the lioness is naturally weaker and more timid than the lion; but such is the strength of her attachment for her young, that for their support she becomes more ferocious and terrible than the lion; she makes her excursions with more boldness, attacks and destroys without distinction all other animals, and carries them reeking to her cubs, whom she thus instructs to suck their blood and tear their flesh. The length of time the lioness goes with young is variously stated by different writers; but from recent observation, which has been verified in the present instance, it appears that the period of gestation is rather more than three months and a half. The lioness has several litters in her life, and at each birth produces three or four whelps. The lion cubs, when first born, are rather larger than a half-grown kitten, or about a foot in length, from the back of the head to the root of the tail. Their colour is a mixture of reddish and grey, with a number of small brown bands, which are most distinct on the dorsal spine. The cubs at the Tower exhibited at their birth very faint traces of this banded livery, but it became more distinct as they grew older, until it was finally lost in the deep fawn of the full-grown animal. In this particular, the lion cub bears some resemblance to the

tiger, and this very circumstance is entitled to the serious attention of the zoologist, as it goes a great way to establish the strong affinity of the lion and the tiger, and may account for the apparent heterogeneousness in the breeding of the two animals.

The first litter of the cubs was whelped on the 20th October, 1827, the day of the memorable battle of Navarino; and considering that the lion is the emblem of Britain, it is rather a singular coincidence, that no lions had been whelped in the Tower since the year 1794, celebrated for the glorious victory gained by Lord Howe over the French fleet; on both of which occasions the lion hearts of England proved their power to be irresistible.

The young lions now in the Tower are allowed to be the finest that have ever been bred in this country; but the ultimate rearing of them is still attended with some risk, as the period has not yet arrived when the shedding of the milk teeth takes place, which has hitherto proved almost always fatal to the young lions which have been bred in this country, and also on the Continent. At present the animals exhibit the highest state of health, although the scratches on their noses bear ample proofs of their quarrelsome disposition; and one of them appears to have been so particularly selected for the rude attacks of its associates, that it has been deemed necessary to confine it in a separate den.

It was a gratifying sight, shortly after their birth, to watch the playfulness of the infant lions, resembling in every respect the merry antics of the kitten, whilst their dam fondled over them, and licked their fur with all the tenderness and affection of the domestic cat; and so strongly does the lioness appear to resemble that animal in her habits, that she carried her young ones about in her mouth, seemingly anxious to conceal them from the gaze of the spectators.

Previously to the lioness having young, she was one of the most gentle and docile animals in the whole menagery, allowing the keepers to treat her with the utmost familiarity; and her tameness was so great, that she was permitted frequently to roam at pleasure in the court-yard, without exciting the least fear in the hearts of the attendants: but no sooner did she become a mother, than a total change took place in her dispositions, exhibiting, as it has been well expressed, "the truly beautiful but appalling picture of maternal tenderness combined with savage ferocity, each in their utmost intensity of force and colouring." The lioness appears to cherish her maternal feelings with an ardour almost unparalleled in the history of any other animal. She watches over her young with that undefined dread of danger to their weak and defenceless state, and that suspicious eagerness of alarm, which keep her in a constant state of feverish excitation; and woe be to the wretched intruder, whether man or beast, who should unwarily, at such a time, approach the precincts of her sanctuary. Even in a state of captivity, and however completely she may have been previously subjected to the controul of her keeper, when a mother she loses all respect for his commands, and abandons herself occasionally to the most violent paroxysms of rage.

In the history of the Museum of Paris, we find that a lioness had there three litters; at the first she produced *nine*, at the second three, and at the third two. When they were some months old, they became very mischievous, and one, in particular, exhibited alarming signs of ferocity; and as in the case of the cubs at the Tower, there appears to exist a great difference in the temperament of the animals, some seeming anxious to obtain the superiority and to lord it over the others, whilst the others appear of a more submissive and gentle disposition. It is to be hoped that these native lions will continue an ornament to their present abode, and be the counterpart of their parents in beauty and in majesty.

THE ANTELOPE

THE ANTELOPE,

IN THE COLLECTION OF EARL DARNLEY, AT COBHAM HALL.

As there appears a general agreement in the nature of the species which form the great genus of the Antelope, it will be merely necessary to observe, that antelopes are animals generally of a most elegant and active make, of a restless and timid disposition, extremely watchful, of great vivacity, remarkably swift and agile, and most of their boundings so light and elastic, as to strike the spectator with astonishment.

The fleetness of the antelope was proverbial in the country which it inhabited, even in the earliest times; the speed of Asahel (2 Sam. vi. 18) is beautifully compared to that of the tzebi, and the Gadites were said to be as swift as the antelopes upon the mountains. Even at the present day, one of the highest compliments that can be paid to female beauty in the eastern regions is, "You have the eyes of an antelope."

Some species of antelopes form herds of two or three thousand, while others keep in troops of five or six. They generally reside in hilly countries, though some of them inhabit the plains; they often browse like the goat, and feed on the tender shoots of trees, which gives their flesh an excellent flavour. It has been stated by Delalande, that, in the southern parts of Africa, those antelopes which inhabit the plains never enter the forests, and that those of the forests never seek either the plains or the marshes; every site retains the species peculiar to it.

The antelope is a variety of the gazelle, and resembles that animal in many particulars, but in others it is essentially different. It has deeper eye-pits than the gazelle, and the horns are also formed differently, being about sixteen inches long, almost touching each other at the bottom, and spreading as they rise, so as at their tips to be sixteen inches asunder. They have the annular prominences of their species, but not so distinguishable as in the gazelle; they have, however, a double flexure, which is very remarkable, and serves to distinguish them from all others of their kind. At the root they have a tuft of hair, which is longer than that of any other part of the body. Like others of the same species, the antelope is brown on the back, and white under the belly; but these colours are not separated by the black streak which is to be found in all the rest of the gazelle kinds. With the exception of four species, the *Antelope gazella, A. caama, A. eucophæa, A. oryx,* the females of the antelope tribe are wholly destitute of horns.

The antelope of the Cape of Good Hope is generally known by the name of the *Springbok*, on account of the astonishing bounds which it takes. Mr. Burchell gives the following interesting description of a herd of these animals:—"At this high level we entered upon a very extensive open plain, abounding, to an incredible degree, in wild animals, amongst which were several large herds of quakkas, and many *wilde-beests* or gnus; but the springboks were far the most numerous, and, like flocks of sheep, completely covered some parts of the plain. Their uncertain movements rendered it impossible to estimate their number, but I believe if I were to guess it at two thousand, I should still be within the truth. This is one of the most beautiful of the antelopes of southern Africa, and it is certainly one of the most numerous. The place afforded no other object to fix the attention;

and even if it had presented many, I should not readily have ceased admiring these elegant animals, or have been diverted from watching their manners. It was only occasionally that they took those remarkable leaps which have been the origin of the name; but when grazing or moving at leisure, they walked and trotted like other antelopes, or as the common deer. When pursued, or hastening their pace, they frequently took an extraordinary bound, rising with curved or elevated backs high into the air, generally to the height of eight feet, and appearing as if about to take flight. Some of the herd moved by us almost within musket shot, and I observed that, in crossing the beaten road, the greater number cleared it by one of those flying leaps. As the road was quite smooth, and level with the plain, there was no necessity for their leaping over it, but it seemed that the fear of a snare, or a natural disposition to regard man as an enemy, induced them to mistrust even the ground which he had trodden." Mr. Burchell further says, the springbok is easily distinguished from all the known species by the very long white hair along the middle of the back, which, lying flat, is nearly concealed by the fur on each side, and is expanded only when it takes those extraordinary leaps which first suggested its name.

In the *Scenes and Occurrences in Caffer Land*, the Antelope is thus spoken of:—"We saw several *hearty beasts*, one of the largest species of deer, with very handsome horns; and the pride of the plain, the spring-buck; the latter, which are extremely timid, are about the size of the common deer, and of the same colour, with a white stripe on each side, and a black stripe along the back, which they have the power of closing and expanding. They take their name from the amazing spring which they make over paths, rocks, or any thing that obstructs their way, and it is done in a singularly graceful manner, the head bowed, the legs hanging, and the body curved, so that the animal appears as if suspended in the air; the fleetest greyhound only can overtake them. It is very amusing to see their contemptuous treatment of all other pursuers; they allow them to come near, then give a bound and a snort, and trot off to a little distance, when they expand their hair on their backs, and appear quite white. They are very destructive to the corn, and are seen on farms in numerous herds."

The immense herds of these animals, which at times pour from the Bushman territory upon the northern boundaries of the Cape colony, have been well described by Captain Stockenstrom, who was a native of that country. "It is scarcely possible (he says) for a person passing over some of the extensive tracts of the interior, and admiring that elegant Antelope, the springbok, thinly scattered over the plains, and bounding in playful innocence, to figure to himself that these ornaments of the desert can often become as destructive as the locusts themselves. The incredible numbers which sometimes pour in from the north, during protracted droughts, distress the farmer inconceivably. Any attempt at numerical computation would be vain, and by trying to come near the truth, the writer would subject himself in the eyes of those who have no knowledge of the country, to a suspicion that he was availing himself of a traveller's assumed privilege. Yet it is well known in the interior, that on the approach of the *trek-bokken*, as these migratory swarms are called, the grazier makes up his mind to look for pasture for his flocks elsewhere, and considers himself entirely dispossessed of his lands until heavy rains fall. Instances have been known of some of these prodigious droves passing through flocks of sheep, and numbers of the latter, carried along with the torrent, being lost to the owners, and becoming a prey to the wild beasts. As long as these droughts last, their inroads and depredations continue, and the havoc committed upon them is, of course, great, as they constitute the food of all classes; but no sooner do the rains fall, than they disappear, and in a few days become as scarce on the northern borders as in any of the more protected districts."

THE EMEUS

In the Royal Menagery [illegible] London

THE EMEUS,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

With the exception of the ostrich, the emeu is the largest bird that is known to exist, being generally six feet high, measuring from its head to the ground. Its legs are about three feet long, and its thigh is nearly as thick as that of a man. The toes differ from those of the ostrich, agreeing with the cassowaries in regard to number, there being three on each foot, whereas the ostrich has but two; all of them have a forward direction, and are extremely thick and short. Its neck is long, its head small, and one of its most distinctive generic characters is the flattening of its bill from above downwards, instead of from side to side. The form of the body appears round, the wings are short, and entirely unfitted for flying, and it is wholly destitute of tail. It is covered from the back to the rump with long feathers, which are of a greyish-brown above, and underneath of a much lighter tinge, almost approaching to a white. The colour, however, differs in the younger birds, they being striped longitudinally with brown and grey. Its pace is uncommonly swift, and it appears to be assisted in its motion by a kind of tubercle behind like a heel, upon which, on plain ground, it treads very securely. In its course it uses a very singular kind of action, lifting up one wing, which it keeps elevated for a time, and then, on letting it drop, it lifts up the other. It is not easy to discover the intent of the bird ni thus keeping only one wing up; and it remains to be ascertained whether it makes use of this wing as a sail to catch the wind, or as a rudder to direct its course, it being wholly destitute of the usual appendage by which the flight of birds is regulated.

The birds from which our portrait is taken are natives of New Holland, where they are hunted by the colonists as an article of food, the taste of which is stated to have a strong similarity to that of beef. It is not, however, only in New Holland that this bird is bred; for it is mentioned by the earlier travellers as having been found in great numbers in Guiana, along the banks of the Oroonoko, in the inland provinces of Brazil and Chili, and the vast forests that border on the mouth of the river Plata. Many other parts of South America were known as the habitat of the emeu, but as the human race extended themselves, it either fell beneath their superior power, or fled from their vicinity.

The emeu is a polygamous bird, and appears in its habits to have a strong affinity to the ostrich; for, speaking of this bird, Nuremberg says, "that it is very peculiar in the hatching of its young. The male compels twenty or thirty of the females to lay their eggs in one nest, and when they have done laying, he chases them away, and undertakes himself the office of incubation; he, however, previously takes the precaution of laying two of the eggs aside, which he does not sit upon." This is perfectly conformable to the account given by Vaillant of the habits of the ostrich, and, therefore, is not unworthy of our belief. "When the young ones come forth," Nuremberg continues, "these two eggs are addled, which the male having foreseen, breaks them, and their putrid contents become immediately the resort of myriads of flies, which supply the young brood with a sufficiency of provision, until they be able to obtain it for themselves."

Another account, however, is given by Wafer, who asserts, that he has seen a great number of eggs of the emeu on the desert shores north of the river Plata, where they were buried in the sand, in order to be hatched by the heat of the climate. This account, however, is attended with a considerable degree of doubt, as it is more probable that the eggs described by Wafer were those of the crocodile or the alligator, which are undoubtedly hatched in the manner alluded to by that traveller.

When the young ones are hatched, they are very familiar, and will follow the first person whom they meet. I have been followed myself, says Wafer, by many of these young birds, which, at first, are extremely harmless and simple, but as they grow older, they become more cunning and distrustful, and their pace is then so swift, that a greyhound can scarcely overtake them.

It would not be a difficult task to rear flocks of these birds in this country, particularly as they are naturally of a familiar disposition, and they might be found to answer domestic purposes, like the hen or the turkey. It must, however, be acknowledged that a full grown emeu would cut rather a preposterous figure on an English dinner-table; but that the breed is capable of being extended in this country, is placed beyond a doubt, by the facility with which the birds have been bred in the Royal Park at Windsor, where a sufficient space of ground has been allotted to them for exercise, which contributes, in an eminent degree, to preserve them in that state of health which they there exhibit.

The emeu in its disposition appears to be perfectly harmless, although when irritated it strikes a very severe blow with its beak, which appears, indeed, to be its only instrument of attack or defence; and, in several instances, we have observed its propensity to strike at objects from a spirit of mischief, or rather, perhaps, to satisfy its voracious appetite with the first object that should happen to come within its range. We were once standing before its cage examining the correctness of the drawing, when, on a sudden, the male bird made a dart at the paper, and in a moment bore it away in triumph in its beak, nor was it recovered without some difficulty.

In its mode of feeding, the emeu, however, differs greatly from both the ostrich and the cassowary. These birds are well known to swallow almost any thing which is not too large to pass down their throats; but the emeu appears to be a granivorous bird, and, in some respects, also an herbivorous one, as it has been known to subsist for a considerable length of time solely on grass; in its domesticated state, however, in this country, its chief food is corn. Nor in its appetite is it so voracious as the cassowary, which in this country has been known to devour in one day four pounds of bread, a dozen large apples, and a bunch of carrots.

The chase of the emeu forms a considerable part of the amusement of the natives of the countries in which it is indigenous; but the swiftness of the bird is so great, that the fleetest dogs are thrown out in the pursuit. It is related that one of them, finding itself surrounded by the hunters, darted among the dogs with such fury, that they made way to avoid its rage, and it escaped, by its amazing velocity, in safety to the mountains.

There is a peculiarity in the structure of the feathers of the emeu which is not discernible in any other species of the tribe. They are apparently double, each quill being divided at the root into two shafts, the barbs of which are distinct from each other, and in their texture are soft and downy. At a distance they assume rather the appearance of a silky covering of hair, than that of the common plumage of a bird.

THE ALPACAS,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The Alpaca may be considered as intermediate between the llama and the vicuna, although, in many of its characteristics, it is decidedly different from either of those animals. Unlike the llama, it has never been reduced to that positive degree of tameness as to render it an animal of burthen, or of any other utility, with the exception of its wool, which, in point of quantity and fineness, far surpasses that of the vicuna. In its constitution, the alpaca is far more robust than the llama, and possesses all the other advantages which render the latter animal an object of so much interest with the natives of the country where it is bred.

The alpaca has been erroneously called the white llama, but a comparison of the two animals will at once decide their difference. The alpaca is of a larger size, and far more muscular; its forehead is flat, and its fleece hangs down as low as its knees. It must also be taken into consideration that we have no positive proof that the colour of the animal in the Zoological Gardens, which is designated as the white llama, is its natural one, or that it be not the effect of mere accident; at the same time we are inclined to espouse the former opinion, as the alpaca which is in the collection of Mr. Wombwell is white, and in every other respect resembles the white llama of the Zoological Society.

It was at one time determined by some spirited individuals, to introduce the three species, the llama, the vicuna, and the alpaca into Europe; but, after various attempts, the naturalization of the animals totally failed, arising either from a difference of climate, or the food not being congenial to their constitution. In the year 1808 a herd of these animals, which originally consisted of thirty-six, were landed at Cadiz, as a present from the Prince of Peace to the Empress Josephine. They were brought from Lima and Conception to Buenos Ayres, by slow and easy journies, never travelling more than two or three leagues a day. Potatoes were their chief food, and when the supply of that root was exhausted, recourse was had to maize and hay; but the latter did not agree with the animals, and if medical aid had not been applied, their death would have been the consequence. Out of the thirty-six which were shipped at Buenos Ayres, eleven only reached the place of their destination, and two of them died shortly after their arrival. The animals could not have arrived at a more unpropitious period. The name of Godoy had become hateful to the people, and every thing connected with him was but the forerunner of its destruction. The alpacas were, therefore, to be thrown into the sea, but the Governor of Cadiz interfered, and gave the animals in charge to an eminent naturalist, who had a spacious zoological garden at San Lucar de Barremeda, in Andalusia. On the invasion of the province by Marshal Soult, he took the animals under his care, and a celebrated French naturalist, who was then with the army, paid the most minute attention to their habits, and took some sketches of them, all of which were lost at the battle of Vittoria. The fact, however, was ascertained by that naturalist, and has been repeated by several travellers, that the individuals of the different species have the remarkable habit of depositing their dung in one particular spot, and it is this singularity which betrays the herds to the hunters of the South American mountains.

The alpacas are always found in considerable herds, and their chief retreat is amongst the rocks

and mountains of Cusco, Potosi, and Tucuman; from which they descend to graze in the vallies, and it is there that they become the sport of the natives. The mode of entrapping these animals is rather curious, and exhibits a striking feature in their natural history. The hunters commence their operations by extending some cords across the places where the animals are likely to effect their escape; to these cords are attached, at stated distances, some tufts of cloth of different colours, which have the effect of so intimidating the animals, that they dare not attempt to overleap the barrier, which could not stand for a moment against their united force. The hunters then begin to make a great noise, and try to drive the animals towards some rocks which are too steep for them to ascend. The extreme timidity of the animal prevents it from turning its head towards its pursuers, and in this state it is easily caught by the hinder legs, and it seldom happens that a single one of the whole herd is allowed to escape. There is a law enacted, which punishes with a heavy penalty these unlimited massacres; but it is a law to which a very slight obedience is paid. In some instances, the hunters are satisfied with the fleeces of the animals, and, having shorn them, restore them to their liberty. From five hundred to a thousand fleeces are sometimes the fruit of these expeditions.

If we refer to Augustin de Zarate, who in 1544 held the office of treasurer-general of Peru, we there find that the pacas, or alpacas, even at that early period, formed a part of the food of the natives, as their flesh was sold in the public shambles in all parts of Peru where the animal was to be found.

"In those places," he says, "where there is no snow, the natives are often in great distress for water, and in order to supply this deficiency, they fill the skins of sheep with water, which they load on the backs of living sheep, (it must be observed that he calls llamas, sheep,) for these sheep of Peru are sufficiently large to serve as beasts of burthen. They have a great resemblance to the camel in their shape, although they have not the hump on the back like that animal. These sheep are able to carry about a hundred pounds, and it was the custom of the Spaniards to ride them, as they travel with ease five or six leagues a day. When the animal is fatigued, it throws itself down upon the ground, and as, from its obstinate disposition, there are no means of making it get up, either by coercion or assistance, the load is then generally taken off. It frequently happens, when the beast is tired and the rider urges him to proceed, that it turns its head round, and discharges its saliva into his face, which is of such a deleterious nature, that the most disagreeable consequences result from it. These animals are of great use and profit to their owners, the wool of them being exceedingly fine and good, especially of that species which are called *pacas*, or alpacas. The fleeces are very long, and very little expense is incurred in their keeping, as a few yams or a little maize will suffice them during the day, and water does not appear to be indispensable to their existence. Their flesh is as good as that of the sheep of Castile, and public shambles are now erected for the sale of their flesh."

In regard to the natural characteristics of the alpaca, it so nearly resembles the llama, that the same description will apply to both. In its state of nature few animals exhibit marks of greater strength or agility. The stag is scarcely more swift, or the goat or the chamois a better climber. All its shapes are delicate and strong, and there is a keenness in its look which is strongly indicative of the natural disposition of the animal. It is fonder of the northern than the southern side of the Andes; often climbing above the snowy tracks of the mountain, and appearing vigorous in proportion to the coldness of its situation. If the dogs surprise a single alpaca upon the plain, they are generally successful; but if once the animal attains the rocky precipices of the mountain, the hunters are obliged to desist from their pursuit.

THE SIMIA MORMON OR TUFTED APE.

THE SIMIA MORMON, OR TUFTED APE,

IN THE COLLECTION OF MR. WOMBWELL.

Simia, in natural history, includes the whole genus of the class and order of Mammalia Primates, of which the generic character is, that the individuals have four front teeth in each jaw, which are approximate; the tusks are solitary, longer, and more remote; the grinders are obtuse. The animals of this genus greatly resemble man in the uvula, eye-lashes, hands, feet, toes, nails, and other parts of the body. They, however, differ widely in the total want of reason, although the line appears, in certain cases, to be drawn so finely between that eminent property of the human race and the instinct of the brute, as to be very often confounded and indistinguishable in its effects. The Apes have, in general, very retentive memories, are full of gesticulation, and excessively rich in imitation; they macerate their food in the cheeks before they swallow it; they are filthy, lascivious, and of an unconquerably thievish disposition. Their greatest enemies are the leopards and the serpents; the latter pursuing them to the summits of trees, and swallowing them entire.

This race of animals, which are very numerous, are almost confined to the torrid zone. They fill the woods of Africa from Senegal to the Cape, and from thence to Ethiopia; a single species, however, is found beyond that line in the province of Barbary. They are also found in all parts of India, and its islands, in Cochin-China, in the south of China, and in Japan; and one kind is met with in Arabia. They swarm in the forests of South America, from the Isthmus of Darien as far south as Paraguay.

These animals, from the structure of their members, have many actions in common with the human kind. The majority of them are fierce and intractable, and difficult to be tamed; others, on the contrary, are of a milder nature, and appear to be capable of a positive degree of attachment to those under whose subjection they live. Their general food are fruits, leaves, and insects; and their voracity often leads them to a wanton destruction of food, from a fear that they should not be able to obtain a sufficiency. The woods are their usual habitation, and their chief residence is in the trees, where they imagine themselves secure from the attacks of their enemies. The Apes may, in some respects, be considered as social animals, as they generally go in large companies; but it is remarkable that this social disposition appears to decline in proportion as the species exhibit a greater magnitude. Thus, the Ourang-outang is an unsocial, solitary animal, whilst the lesser species seem to delight in social intercourse, although it must be remarked that the different species never mix with each other, but always keep within a certain boundary which they have chosen for their habitation. The activity of the monkey has been long proverbial; and from the various reports of travellers, who have seen them in their native country, their feats of agility sometimes exceed credibility. The ape is not a carnivorous animal, but so prone to mischief, that it will often rob the nests of birds of the eggs and young; and it is to be observed, that in those countries where apes most abound, the feathered tribe discover singular sagacity in fixing their nests beyond the reach of their invaders.

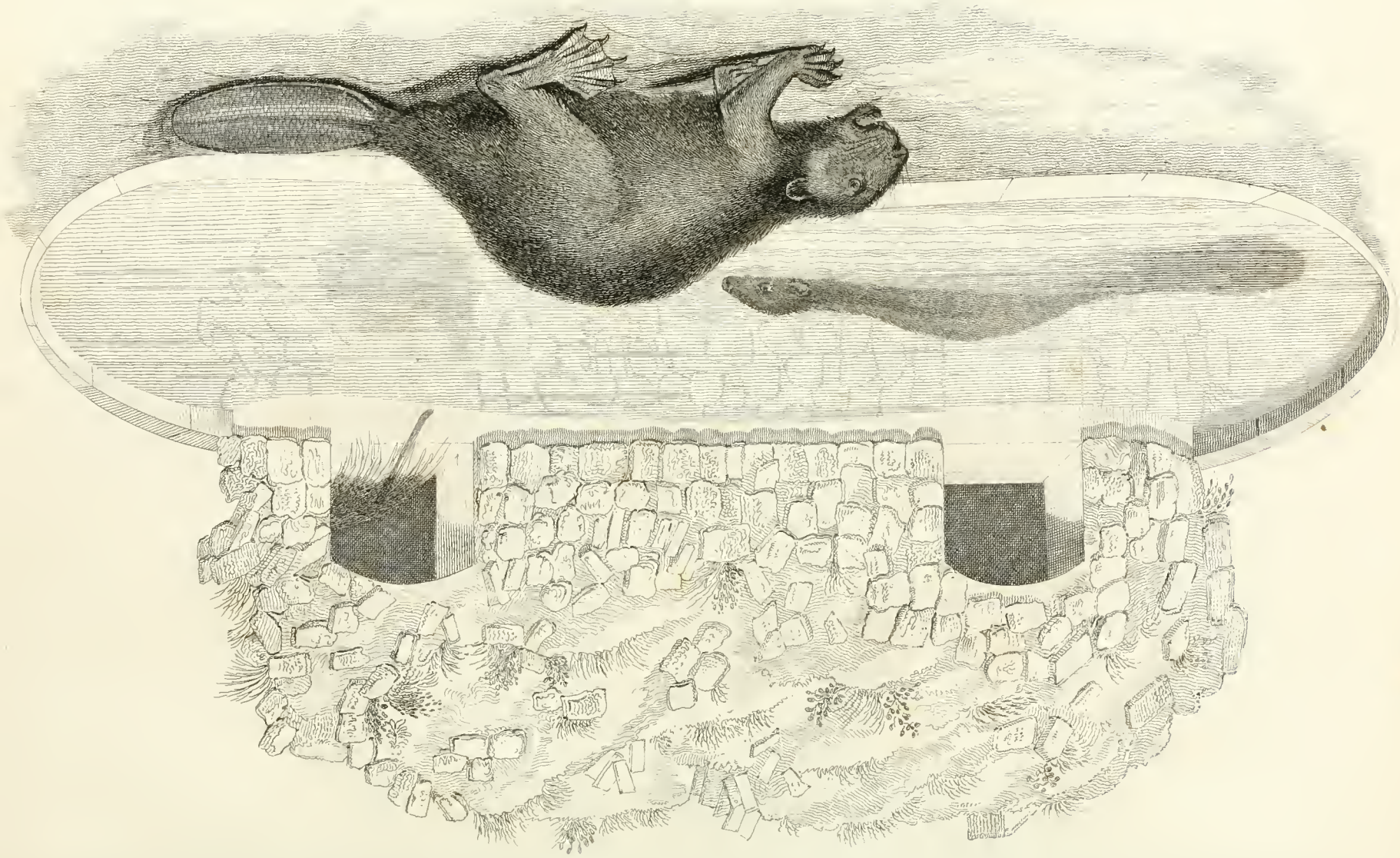
The Mormon, which now forms a part of the extensive collection of Mr. Wombwell, may, in

many respects, be considered as one of its greatest curiosities. The animal appears almost in a domesticated state; and amongst the other propensities of those by whom it is surrounded, it has acquired that of drinking its pint or glass of porter with apparently the same satisfaction as any of the most inveterate porter-drinkers of the metropolis; nor does this beverage appear to be injurious to its constitution, for it exhibits rather an uncommon degree of health and spirits. The Mormon may be considered as the most remarkable of the whole genus for brilliancy and variety of colour. The general tinge is a rich and very deep yellowish brown; the hairs, if minutely inspected, are speckled with yellow and black. The most prominent and remarkable part of the animal, however, is the nose, the whole length of which is a deep blood red, but the parts on each side are of a fine violet blue, marked by several oblique furrows, the whole forming one of the most singular contrasts which the visage of any animal can display. The remainder of the face is of a pale whitish yellow. On the top of the front the hair rises in a remarkable manner into a pointed form, somewhat similar to the toupee worn by the elegantes in former times, and beneath the chin is a pointed beard of a light orange yellow. Round the back of the neck the hair is much longer than on any other parts, and inclines downwards and forwards somewhat in the manner of a wreath or tippet. The hands and feet are of a dusky colour, and are furnished with broad pointed claws. The general form of the face is long, with the snout ending somewhat abruptly.

Of the general manners of the animal, it appears to possess all the native vices of its genus. Its lasciviousness is apparent in a most striking degree, and forms one of the most unpleasant drawbacks in the contemplation of the animal. It has been often remarked that the larger species of ape appear to entertain a decided knowledge of the difference of the human sexes, and that the natural ferocity of the animal has been suddenly checked by the view of a female; but it must be confessed that the cage of the Mormon is not a place before which a female can stand without a wound being inflicted on her modesty.

Of the whole genus it may be observed, that the Baboons are commonly of a ferocious and sullen disposition. The larger apes are also of a malignant temper, except the Ourang-outang and the Gibbons. The Monkies, so called, are extremely various in their disposition; some of the smaller species are lively, harmless, and entertaining, while others are remarkable for the mischievous malignity of their temper, and the capricious uncertainty of their manners. It is no easy task to determine with exact precision the several species of this extensive genus, since, exclusive of the varieties in point of colour, they are often so nearly allied as to make it difficult to give real and distinctive characters.

The Mormon is not frequently an inhabitant of our menageries, for, being a native of the interior parts of Africa, it is seldom caught in its adult state; and the rearing and transportation of it when young have always been considered a task of some difficulty. At its full growth, the animal, in an upright posture, measures about five feet; but its usual posture is on its haunches, when its measurement is about three feet. The structure of the hands and the feet, when observed with anatomical correctness, seems to prove that the animal was principally designed by Nature for walking on four legs, as it is represented in the engraving, and not for an upright posture, which is, perhaps, only occasionally assumed, and which is considered to be more the effect of instruction than a decided habit of nature.



THE BEAVERS,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The Beaver is easily distinguished from all other quadrupeds by the peculiar appearance of its tail, which is of an oval form, nearly flat, except on its upper surface, where it is slightly convex, entirely destitute of hair except at the base, and marked with scaly divisions like the skin of a fish. The body is about three feet long, and the tail about one foot. The general colour of the fur is a deep chestnut, but it is sometimes found perfectly black, white, cream-coloured, or spotted. The beaver is found in most of the northern parts of Europe and Asia, and is very abundant in North America, of which country the animals now under our consideration are natives.

The generic character of the beaver is, that the front teeth in the upper jaw are truncated, and hollowed with a transverse angle; in the lower jaw the teeth are transverse at the tips. It has four grinders on each side; the tail long, depressed, and scaly. The collar bones are in the skeleton. There are only two species known, the *Fiber*, or common beaver, and the *Huidrobius*, or white beaver.

The beaver is not only an amphibious animal, but it is said to form the connecting link between quadrupeds and fishes. Of all animals it is considered as possessing the greatest degree of natural or instinctive sagacity in the construction of its habitation; preparing, in concert with others of its own species, a kind of arched caverns, or domes, supported by a foundation of strong pillars, and lined or plastered internally with a degree of neatness and accuracy unequalled by the art of any other quadruped. The favourite resorts of the beaver are retired watery and wooded situations, of which it must have full and undisputed possession. The depth of the water must be such as to allow the animal sufficient space to swim under the ice. The male and female with their young of one year old, called by the Indians *Peoys*, form a family, which generally consists of six. These inhabit one cell; but when they arrive at the age of two years old, *Paylems*, they go off and build for themselves.

The beavers begin to assemble in the month of June or July for the purpose of uniting into a society. They arrive in great numbers from all quarters, and soon form a troop of 200 or 300. The place of rendezvous is generally that which has been fixed upon for their establishment, and is always on the banks of waters. In rivers or brooks, where the waters are subject to rise and fall, they build a bank, thus forming a pond or piece of water, which remains always at the same height. The bank traverses the river from one side to the other like a sluice, and is often from eighty to one hundred feet long, by ten or twelve broad at the base. This pile for animals of so small a size appears to be enormous, and the solidity with which the work is constructed is truly astonishing. If they find on the margin a large tree, which can be made to fall into the water, they begin with cutting it down to form the principal part of their work. The tree is often thicker than the body of a man. By gnawing the foot of the tree with their four cutting teeth, these ingenious labourers accomplish their purpose in a short time, and always make the tree fall across the river: they then cut the branches from the trunk to make it lie level. Several beavers are at the same time employed in traversing the banks of the river to cut down smaller trees. These they dress, and cut to a certain length to make stakes of them, and first drag them by land to the margin of the river, and then by water to the place where

the building is carrying on. These piles they sink in the ground, and interweave the branches with the larger stakes. In order to dress these stakes and put them in a situation nearly perpendicular, some of the beavers raise the thick end against the margin of the river, or against the cross-tree, while others plunge to the bottom, and dig holes to receive the points that they stand on end. While some are labouring in this manner, others bring earth, which they place with their feet and beat firm with their tails. They carry the earth in their mouths and with their fore-feet, and transport it in such quantities that they fill all the intervals between the piles with it. The stakes facing the under part of the river are placed perpendicularly, but the rest of the work slopes upward to sustain the pressure of the fluid, so that the width of the bank is reduced to two or three feet at the top. When any breaches are made in the bank by sudden inundations, they lose no time in repairing them as soon as the water subsides. The dwelling-places of these curious animals are cabins built upon piles, near the margin of the pond, and have two openings, one for going out on land, and the other for throwing themselves into the water. The form is either oval or round, varying in size from four to eight or ten feet in diameter. Some of them consist of three or four stories, and the walls are about two feet thick, raised perpendicularly upon planks, which serve both for foundations and floors to their houses. They are impenetrable to rain, and resist the most impetuous winds. The partitions are covered with a kind of stucco nicely plastered, and each cabin has its own magazine of winter food, proportioned to the number of its inhabitants, who have all a common right to the store. Some villages are composed of twenty or twenty-five cabins, but these large establishments are rare, and the common republics seldom exceed ten or twelve families, of which each has her own quarter of the village, her own magazine, and her separate habitation. They allow no strangers to locate in their neighbourhood. The smallest cabins contain two or four, and the largest eighteen, twenty, and sometimes thirty beavers.

When any danger approaches, they advertise one another of it by striking their tails on the surface of the water, the noise of which is heard at a great distance, and resounds through all their habitations. Each then takes his post; some plunge into the lake, others conceal themselves within their walls, which no animal will attempt to open or overturn. During the greatest part of the day they sit up with their heads and part of the body elevated, and their posterior parts sunk in the water. They often swim a long way under the ice, and it is then that they are the most easily taken, by attacking the cabin at one side, and at the same time watching at a hole made at some distance in the ice, where they are obliged to repair for the purpose of respiration. The females bring forth in the end of winter, and generally produce two or three young at a birth. About this time they are left by the males, who retire to the country, in order to enjoy the pleasures and the beauties of the spring. They return occasionally to their cabins, and are occupied in nursing, protecting, and rearing their young, who at the expiration of a few weeks are in a condition to follow their dams. The females, in their turn, make little excursions to recruit themselves in the air, by eating fresh bark and herbage; and in this manner they pass the summer upon the waters and in the woods. They do not assemble again till autumn, unless the bank or cabins are overturned by inundations.

The animals in the Zoological Gardens appear perfectly reconciled to their state of comparative captivity, and are become so tame as to accept a biscuit, or any other article of food which is offered to them, with the greatest docility.

THE MOOSE DEER OR ELK

THE MOOSE-DEER, OR ELK.

IN THE COLLECTION OF MR. CROSS, ROYAL MEWS, LONDON.

The Moose-deer or elk may be considered as the largest of the deer tribe, and is not often to be seen in the menageries of this country. According to the accounts of some travellers, a full grown elk has been known to attain the height of seventeen hands, and to weigh above twelve hundred pounds. Its shape, particularly its head, is rather inelegant. Its horns are solid, covered while young with a hairy skin growing from the top; they are naked and annual branched. They spread out immediately from the base into a broad palmated form, and at the top are sometimes twelve feet asunder. It has eight front teeth in the lower jaw, no canine teeth, and sometimes single teeth in the upper jaw. Its neck is much shorter than the head, with a short thick upright mane of a light brown colour. The eyes are small, the ears about a foot long, very broad, and they appear to be almost in continual motion. The nostrils are very large; the upper lip broad and heavy, hanging considerably over the lower, and has a deep fulcus in the middle, so as to appear almost bifid. Its colour is a dark-greyish brown, much paler or inclining to whiteness on the legs and beneath the tail. The hair, which is of a strong, coarse, elastic nature, is much longer on the top of the shoulders, and on the ridge of the neck, than on the other part, forming a kind of mane. Its horns sometimes weigh fifty-six pounds, and on a moderate calculation measure each about thirty-two inches in length. The elk now in the possession of Mr. Cross has its horns in the first stages of their growth, and the reproduction of horns constitutes, in many points of view, one of the most remarkable phenomena of animal physiology. It affords a most striking proof, first of the power of the nutritive process, and of the rapid growth which results from this process in warm-blooded animals—for the horn of a stag, which may weigh a quarter of a hundred weight, is completely formed in ten weeks; secondly, of the remarkable power of absorption, by which, towards the time of shedding the old horn, a complete separation is effected of the substance which was before so firmly united with the frontal bone; thirdly, of a limited duration of life in a part of an animal, entirely independent of the life of the whole animal, which in some of the deer tribe extends to thirty years; fourthly, of change of calibre in particular vessels—for the branches of the external carotid, which supply the horn, are surprisingly dilated during its growth, and recover their former dimensions when that process has ceased; fifthly, of a peculiar sympathy which is manifested between the growth of the horns and the generative functions. The horn is generally shed in the spring, and reproduced in the summer.

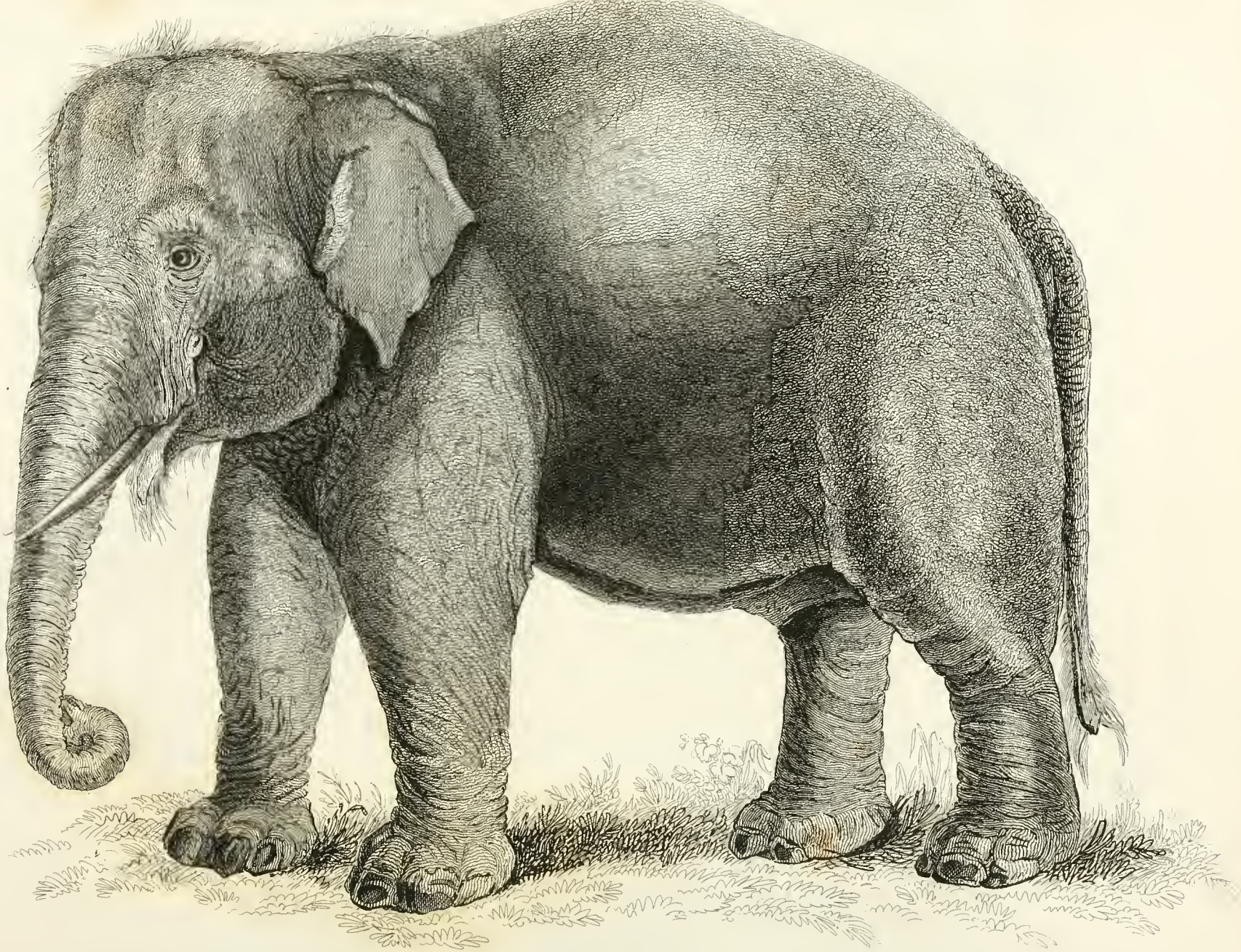
The elks generally inhabit the Isle of Cape Breton, Nova Scotia, and the western side of the Bay of Fundy, Canada, and the country round the Great Lakes, almost as far south as the river Ohio. These may be considered as their present northern and southern limits of the New Continent. In Europe it is found chiefly in Sweden, Norway, and Russia. In Asia, it is most frequently met with in Siberia, where it grows to an enormous size. The elk and the moose, according to Mr. Pennant, are the same species, the latter being derived from *Musa*, which in the Algonkin language signifies that animal. In this country it was formerly called the black moose, to distinguish it from the stag, which was called the grey moose. The French call it *L'Orignal*. The elk was known to the Romans by the name of *Alce* and *Machlis;* they believed that it had no joints in its legs; and from the extraordinary size of the upper lip, they entertained the singular conceit, that it could not feed without going backward as it grazed.

The elks reside amidst forests, chiefly for the convenience of brousing the boughs of trees, because they are prevented from grazing with ease, like the other species of the deer, on account of the shortness of their neck and the length of their legs. In this respect the elk bears some resemblance to the giraffe, as neither of these animals, from the peculiarity of their make, can subsist only by grazing. The elk has frequently recourse to aquatic plants, which it can readily get at by wading, and then bringing its mouth on a level with its food. It is related by Mr. Sarrasin, that they are very partial to the *Anagyris fœtida*, or stinking beau trefoil, to obtain which, they will often scrape away the snow with their feet, and they seldom miss the place where that herb is to be found. In passing through the woods, they raise their heads to an horizontal position, to prevent their horns from being entangled in the branches. They have a singular gait; their pace being a shambling trot, but nevertheless they proceed with great swiftness. In their common walk, they lift their feet very high, and will, without any difficulty, step over a gate five feet high. They feed principally in the night. If they graze, it is always against an ascent, which is to be accounted for by the reasons already given in detailing the peculiarity of their structure. Its faculty of hearing is supposed to be more acute than its sight or scent, and the almost incessant motion of its ears seems to imply that it is always on the alert to catch any sound which may be indicative of approaching danger. It is the acuteness of this faculty which renders it very difficult to kill it in the summer time, as the Indians have then no other method of accomplishing their task, than by creeping after the animal amongst the trees and bushes, until they arrive within gun-shot of their prey. During the winter, when the snow is frozen so hard that the natives can proceed upon it in their snow-shoes, they are able frequently to run it down, for its slender legs break through the snow at every step, and plunge it up to the belly.

The elk, like most other of the deer tribe, is a ruminating animal, although that process does not appear to take place so periodically as with the ox or the sheep. They begin to breed in autumn, and the males are at that time very furious, seeking the females by swimming from isle to isle. The female produces from one to three at a birth, generally about the end of April or the beginning of May, and the young follow the dam for about a year. During the winter, they keep in herds and in deep snows. They collect in considerable numbers in the forests of pines for protection from the inclemency of the weather under the shelter of those evergreens. They are very inoffensive, except in the rutting season, or that they are wounded, when they will turn on the assailant and attack him with their horns, or trample him to death beneath their great hoofs.

The flesh of the moose-deer is extremely sweet and nourishing, and the Indians assert that they can travel three times further after a meal of moose, than after any other animal food. The tongues are excellent, but the nose is perfect marrow, and esteemed the greatest delicacy in Canada. The skin makes excellent leather, being strong, soft, and light. The Indians dress the hide, and after soaking it for some time, stretch and render it supple by a lather of the brains in hot water. They not only make their snow-shoes of the skin, but after a chase form the canoes with it; they sew the skins neatly together, cover the seams with an unctuous earth, and embark in them with their spoils to return home. The hair on the neck, withers, and hams of a full-grown elk is of much use in making mattresses and saddles, being by its great length well adapted for those purposes. The palmated parts of the horns are excavated by the savages, and converted into ladles which will hold about a pint.

The female elk is smaller in size than the male, and is wholly destitute of horns; the flesh, however, of the lattter is preferred, nor will the Indians eat of the flesh of the female during the breeding season.



W. Panormo del. et sculp.

THE ELEPHANT.

THE ELEPHANT,

IN THE COLLECTION OF MR. WOMBWELL.

This animal, on account of its size and strength, has attracted the attention of mankind from the earliest ages. By the ancients he was considered as a formidable engine of war, and he is still employed in the service of the Eastern monarchs, being very useful in the transportation of artillery and baggage, and is also considered a necessary appendage to their magnificence.

The usual height of the elephant is nine or ten feet, although in some countries he is said to attain the height of twelve feet. His body is very large, and of a clumsy form, his head being rather small in proportion to the size of his body; his back is arched, and his legs very short and thick. His eyes are very small; his ears large and pendulous. The trunk may be considered as one of the most wonderful instruments with which nature has gifted any animal, being little inferior in flexibility and utility even to the hand of man. This organ appears to be composed of a great number of flexible rings forming a double tube, ending in a circular tip that is somewhat flattened, and furnished with a projecting point, or fleshy moveable hook, of exquisite sensibility, and so pliable, that by means of it the animal can pick up from the ground almost the smallest object. Its lower surface is somewhat flattened, but the upper is of a circular form. The trunk is the principal organ of breathing to the elephant, being terminated by two orifices that are the nostrils. By means of this tube he supplies himself with food, taking hold of it with his trunk, and conveying it into his mouth. The skull of the elephant is extremely thick, but not solid, there being a number of cavernous cells between the outer and inner laminæ. The feet of this animal, which are undivided, are edged with five rounded hoofs; the tale is of a moderate length, and is terminated by a few scattered hairs, very thick, and of a blackish colour. The general colour of the skin is a dusky or blackish-brown, but in some parts of India they are found of a white colour, though this is a rare occurrence. In China a white elephant is considered a royal beast, as no one possesses there the privilege of using a white elephant but the emperor himself.

The elephant is found on the continent of Asia, in several of the Asiatic islands, especially Ceylon, and in the southern parts of Africa. The Ceylonese elephants are in general larger than those of Africa. Captain Beaver informs us, that the little island of Bulama, on the western coast of Africa, abounds with them. The ordinary food of these animals consists of herbs, roots, leaves, and the tender branches of trees, which they break off with their trunks. They feed together in considerable herds, and, as they require a large quantity of fodder, frequently change their situation. They usually march in troops, the oldest keeping foremost, and the middle-aged bringing up the rear. The females are placed in the centre, carrying their young firmly held on their trunks. This order they observe when they forage near the haunts of men, but when at liberty to range in extensive desert plains, they are less guarded. They often make great havoc in the cultivated fields, destroying even more with the weight of their enormous feet than they consume as food. They are fond of cool, sequestered places, where they can be sheltered from the mid-day sun, and they love to bathe themselves with water, which they do by pouring it over their bodies with their trunks. The elephant uses many artifices to rid himself of the musquitoes; he strikes them with his tail, his ears, or his trunk; he con-

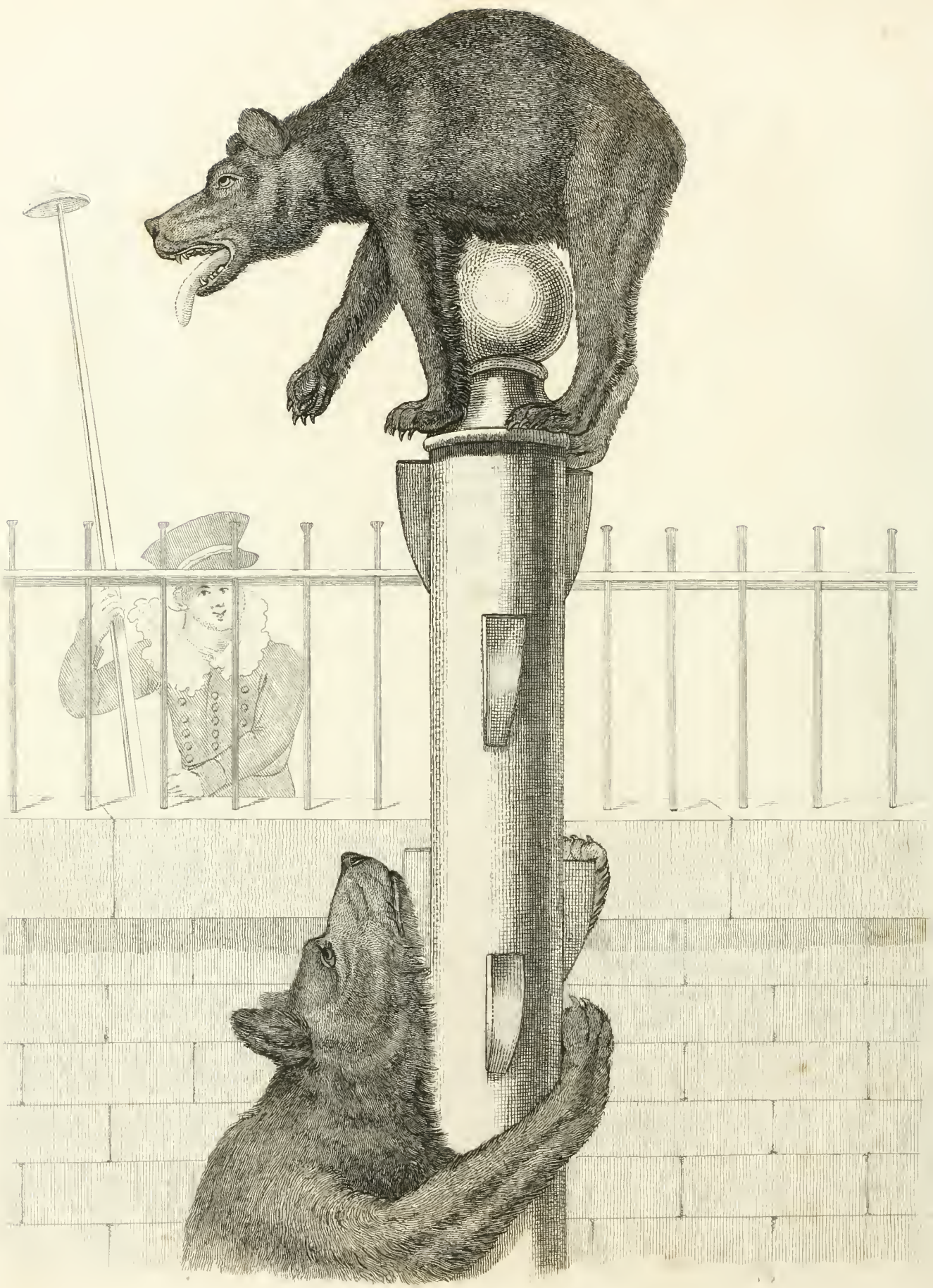
tracts his skin, and crushes them between its wrinkles; he gathers boughs from the trees with his trunk, and brushes them away, and when all these arts are unsuccessful, he collects dust with his trunk, and strews it over the most sensible parts of his body. He has been seen to dust himself in this manner several times a day, especially after bathing. He swims with great ease, and in this way whole troops sometimes pass over rivers and narrow straits.

The teeth, or tusks, of the elephant are a well-known article of commerce: we are indebted to Mr. Corse Scot, who resided many years in India, for the most correct information respecting them. The tusks in some female elephants are so small as not to appear beyond the lip, whilst in others they are almost as large and long as in one variety of the male, called Mooknah. The grinders are much alike in both sexes. The tusks are fixed very deep in the upper jaw, and the root or upper part, which is hollow, goes as high as the insertion of the trunk round the margin of the nasal opening to the throat, which opening is just below the protuberance of the forehead. Through this opening the elephant breathes, and by its means he sucks up water into his trunk; between it and the roots of the tusks there is only a thin bony plate. The first, or milk tusks of an elephant never grow to any considerable size, but are shed between the first and second year, when not two inches in length. The largest elephants' tusks which Mr. Scot ever saw in Bengal did not exceed the weight of seventy-two pounds avoirdupois, and at Tippera they seldom exceed fifty pounds each. Both these weights are, however, very inferior to that of the tusks brought from other parts to the India-House, where some have weighed one hundred and fifty pounds each.

The time of gestation of the female elephant has been much disputed. Aristotle stated it at two years, and Buffon was at one time led to fix it at the same period. The latter was, however, subsequently induced to consider nine months as the most likely time, and in this he was followed by Mr. Pennant. Mr. Scot has, however, ascertained by actual experiment, that the female really goes with young nearly twenty-one months. The young, when first born, is about three feet high, and continues growing for sixteen or eighteen years. It was supposed by Buffon that the young elephant sucked by means of its trunk, but later observations have shewn that it sucks in the usual way with the mouth, using the trunk for grasping the teats of the mother, to press out the milk. It has not been yet ascertained how long an elephant usually lives in its native forests. In captivity he is said to live about one hundred and fifty years, and it is therefore not improbable that in his natural state he may attain the age of two hundred years.

The elephant when tamed is gentle, obedient, tractable, and patient of labour. He is so attentive to the commands of his governor, that a word or look is sufficient to stimulate him to the greatest exertions. His attachment to his keeper is remarkable; he caresses him with his trunk, and frequently will obey no other master. He knows his voice, and can distinguish between the tones of command, of approbation, and of anger. Elephants are sometimes employed in Eastern countries as the executioners of public justice, and they will trample a criminal to death, break his limbs with their trunks, or impale him on their enormous tusks, according to the orders given him.

The elephant, of which our engraving is an exact likeness, was purchased by Mr. Wombwell at the enormous price of one thousand guineas. The keepers rasp his hide daily with the coarsest files, and then anoint him with oil, to preserve the lubricity of his hide, which, without that unction, would partake so much of the nature of parchment, as to prevent the animal, without great pain, from prostrating itself, and might eventually prove the means of its death.



THE BEARS,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

At the termination of the walk called the Upper Terrace, in the Zoological Gardens, is situate the Bear Pit, which is inhabited by the animals of which our engraving is an exact representation. The pit is about twenty feet deep, with a dwarf wall and coping with iron rails. In the centre is a strong mast, or pole, with projecting steps, by which the bears ascend with considerable agility when any thing is presented to them. In this pit were formerly confined three European bears, two from the Arctic Regions, and one Russian black bear, known by the familiar name of Toby, presented by the Marquess of Hertford, who had previously kept him at Sudborne, where he was noted for his civilized faculty of distinguishing strong ale from beer.

The bear is an animal, for the most part, of large size and great muscular powers. It is not only a savage but a solitary animal, taking refuge in the most unfrequented parts, and the most dangerous precipices of uninhabited mountains. He chooses his den in the most gloomy recesses of the forest, in some cavern that has been hollowed by time, or in the hollow of some old enormous tree, whither he retires alone, and passes a part of the winter without provisions, or without ever stirring abroad.

There are only three species of the bear, the white or polar bear, called also the sea-bear, or *Ursus maritimus;* the brown bear, or *Ursus arctos;* and the black or grizzly bear, or *Ursus americanus*. As we shall have to enter into a detail of the latter species when we come to treat of the animal confined in the menagery in the Tower, we shall confine ourselves at present more particularly to a description of the species which form the subject of our engraving.

The brown bear is to be found in almost every latitude of Europe, in China, Japan, Arabia, Egypt, and as far as the Island of Java. Its generic character consists in its having six front teeth in each jaw; the two lateral ones of the lower jaw are longer than the rest, and lobed with smaller or secondary teeth at their internal bases. There are five or six grinders on each side, and the canine teeth are solitary. The tongue is smooth and the snout prominent. The eyes are furnished with a nictitating or winking membrane.

The common bears vary much in colour; some are brown, others black, and others gray. The brown kinds live chiefly on vegetables, and the black ones in a great measure on animal food, such as lambs, kids, and even cattle. The black bears are so remarkably attached to each other, that the hunters never dare to fire at a young one while the parent is on the spot, for if the cub happen to be killed, she becomes so enraged that she will either avenge herself or die in the attempt. If, on the other hand, the mother should be shot, the cubs will continue by her side long after she is dead, exhibiting the most poignant affliction.

The voice of the bear is a kind of growl, a harsh murmur, which, when enraged especially, is increased by a clashing of the teeth. However mild and obedient he may appear before his master, he ought still to be distrusted, and treated with circumspection. This animal is capable of some degree of instruction, and there are few who have not seen him stand on his hind legs, and dance in a rude and awkward manner to tunes either sung, or played on an instrument. The method of learning these animals to dance is attended with considerable pain: they are placed on hot iron plates, during which time a person stands by beating a small drum. The heat of the plates is greater than the animal can bear, and hence arises that constant motion with his feet which is erroneously styled dancing. The

animal having undergone this discipline for some time, is considered fit to appear before the public; and so strongly is the association of his former sufferings connected with the sound of the drum, that he no sooner hears it, than he begins to make the same motion with his feet as during his tuition on the iron plates. But even in this tutoring it is necessary that the animal should be taken young, and held in constraint ever after. The bear which has passed his youth is not to be tamed, nor even held in awe, and shews himself, if not actually intrepid, at least fearless of danger. The wild bear turns not from his path, nor offers to shun the sight of man; and yet, it is said, by a certain whistle he may be surprised, and so far charmed as to stop and stand upon his hind-feet. This is the time to shoot, or by one method or other to destroy him, for when only wounded in an attack, he darts with fury at his foe, and clasping him with his fore-paws, is sure to stifle or strangle him, unless immediate assistance be given. The bear enjoys the senses of seeing, hearing, and feeling, in great perfection, and yet, compared with the size of the body, his eye is very small; his ears are also short, his skin coarse, and his hair very thick. His sense of smell is exquisite, more so, perhaps, than that of any other animal; the internal surface of his nose being very extensive, and excellently calculated to receive the impression of smells. He strikes with his paw as a man strikes with his fist; but in whatever particular he may bear a rude resemblance to the human species, he is only rendered the more deformed by it, nor does it give him the smallest superiority over other animals.

It is in the winter season that the females generally bring forth their young, which are usually two in number. When she is with young, the she bear is exceedingly fat, sleeping the greater part of her time, and consequently, having very little exercise or motion, must necessarily lose very little by perspiration. Before the young leave the womb, the formation is perfect, and if either the fœtus of the bear, or the bear when newly born, appear at the first glance unshapely and unformed, it is merely because there is want of proportion in the body and members even of the grown bear, and because, which is well known to be the case in all animals, the fœtus, or new-born animal, is always more disproportioned than the grown animal.

Bears are so numerous in Kamschatka that they are often seen roaming about the plains in great companies, and they would infallibly have long since exterminated all the natives, were they not here much more tame and gentle than the majority of their species are in other parts of the world. In spring they descend in multitudes from the mountains to the mouths of the rivers, for the purpose of catching fish. If there be plenty of this food, they eat nothing but the heads of the fish; and when at any time they find the fishermens' nets, they dexterously drag them out of the water, and empty them of their contents.

The bear has been at all times a favourite object of the chase, on account of the many important respects in which he is useful to mankind. It would be difficult, says Mr. Tooke, in his view of the Russian empire, to name a species of animals, with the exception of the sheep, so variously serviceable to man as the bear is, after his death, to the Kamschatdales. Of the skin they make beds, covertures, caps, and gloves, and collars for their sledge-dogs. Those who go upon the ice for the capture of marine animals make their shoe-soles of the same substance, which thus never slip upon the ice. The fat of the bear is held in high estimation as a savoury and wholesome food, and when rendered fluid by heat, it supplies the place of oil. The flesh is esteemed a great delicacy, and a bear ham, even among more refined nations, is no despicable *bonne bouche* for the professed epicure. The intestines, when cleansed and properly scraped, are worn by the *fair sex* as masks to preserve their faces from the effects of the sunbeams, which here being reflected from the snow, are otherwise found to blacken the skin. Of their intestines they also make window panes, which are as clear and transparent as those made of Muscovy glass. Of the shoulder-blades are made sickles for cutting grass, and the head and haunches are hung up by these people, as ornaments and trophies, on the trees around their dwellings.

H. Berthoud del.

THE TIGERS.

In the Royal Menagery Tower of London.

THE TIGERS,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The tiger is undoubtedly one of the most beautiful of quadrupeds: the prevailing colour of the body is a deep tawny or orange yellow; the face, throat, and lower part of the belly being nearly white; the whole is traversed by numerous black stripes, forming a bold and striking contrast with the ground colour, and which are smaller on the face and breast than on the other parts of the body. The tail is shorter than the body, and is surrounded with black rings, the number of which is almost invariably fifteen. The average height of the tiger is about three feet, and the length nearly six feet. The size of the animal, according to some authors, is larger, and, according to others, rather smaller than the lion. There, indeed, appear to be two or more distinct animals confounded under the general name of tiger, in the same manner as the panther has been called the leopard, and the cougouar the panther. The true tiger is the largest and most powerful of these animals, and has obtained the appellation of the royal tiger in testimony of this pre-eminence. This animal is a native of Bengal, the kingdom of Siam, and of Tonquin, of China, Sumatra, in fact, of all the countries of southern Asia, situated beyond the Indus, and extending to the north of China.

The tiger may be considered as the most ferocious of quadrupeds; indeed, so sanguinary is his disposition, that there is no animal, however strong and powerful, that he will not venture to attack. He commits the most lamentable ravages among flocks and herds in the countries where he resides, and neither the sight nor the opposition of man has any power to make him desist. When undisturbed in seizing an animal, he plunges his head into his body, and drinks large draughts of blood, the sources of which are generally exhausted before his thirst is appeased. Dreadful combats sometimes take place between the tiger and the lion, and they are carried on with such fury and obstinacy, that both parties are often found dead together.

The method of the tiger's seizing his prey is by concealing himself from view, and springing upon it with a horrible roar. His cry in the act of springing on the victim is said to be hideous beyond expression; and we are told that, like the lion, if he misses his object, he walks away without repeating the attempt. When he can securely attack mankind, he is said to prefer them to any other prey, but he seldom makes an open attack upon any creature that is capable of resistance. The roar of the tiger, which is chiefly heard during the night, begins by intonations and inflections, deep, melancholy, and slow; presently it becomes more acute, then the animal suddenly exerting himself utters a violent cry, interrupted by long, tremulous sounds, which make a distracting impression upon the mind.

Near the borders of Tartary, tigers are very frequent, and in so populous an empire as China it would seem impossible for them to have remained till the present day unextirpated. In the northern roads, hundreds of travellers are sometimes seen with lanterns carried before them to secure them from the attacks of these ravenous animals. In some parts of India, tigers are particularly fatal to wood-cutters and labourers about the forests, and they have been known to swim to boats at anchor, at a little distance from the shore, and snatch the men from on board. In Java they are so much dreaded, that when any person of consequence goes out into the country, he has with him men who blow incessantly a kind of small French horn, the shrill sound of which frightens these creatures away.

The hunting of tigers is a favourite amusement with some of the eastern princes, who go in search of them, attended by considerable bodies of men, well mounted and armed with lances. As soon as

the animals are roused, they are incessantly attacked on all sides with pikes, arrows, and sabres, and are presently destroyed. This diversion, however, is always attended with danger; for if the tiger feel himself wounded, he seldoms retreats without sacrificing one of the party to his vengeance. There are men, who, covered with a coat of mail, or even armed only with a shield, a poniard, and a short scimitar, will dare to attack these blood-thirsty animals singly, and fight with them life for life, for in combats of this nature there is no other alternative than to vanquish or to fall.

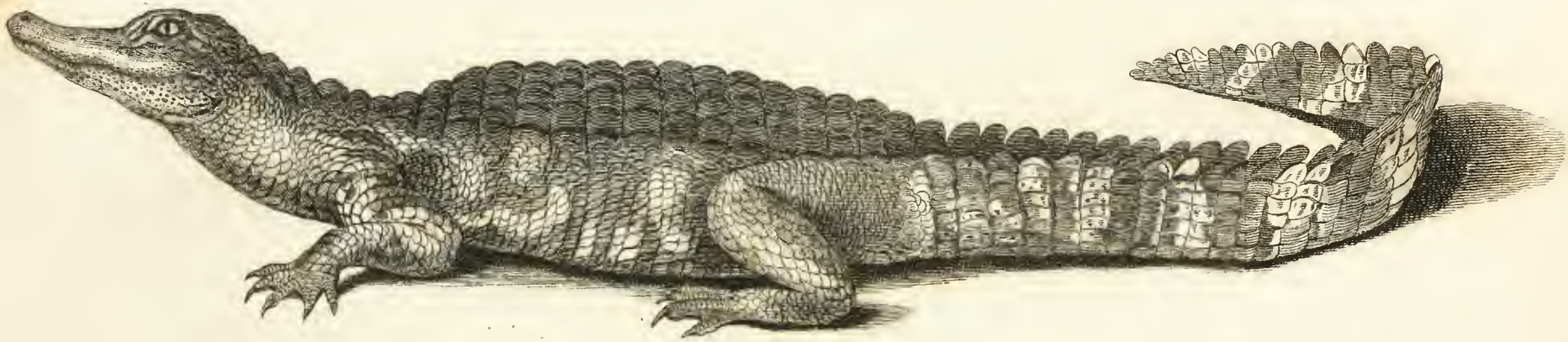
The tiger, if taken young, may for a short time, at least, and till his ferocity comes with his age, be in some measure domesticated, and rendered mild and playful. A beautiful young tiger, brought in the Pitt, East Indiaman, from China, was so far domesticated as to admit of every kind of familiarity from the people on board the ship. It seemed to be quite harmless, and was as playful as a kitten. It frequently slept with the sailors in their hammocks, and would suffer two or three of them to repose their heads on its back as upon a pillow, while it lay stretched out upon the deck. In return for this indulgence, it would, however, now and then steal their meat. Having one day stolen a piece of beef from the carpenter, he followed the animal, took the meat out of his mouth, and beat it severely for the theft, which punishment it suffered with all the patience of a dog. It would frequently run out on the bowsprit, climb about the ship like a cat, and perform many other tricks with an agility that was truly astonishing. This animal was taken on board the ship when it was only a month or six weeks old, and arrived in England before it had quite completed its first year. On its arrival it was presented to the King, and was afterwards deposited in the Tower of London. It was even then reckoned to be perfectly good natured, and was in no instance known to be guilty of any savage or mischievous tricks.

An instance of the extraordinary ferocity of the tiger occurred in the melancholy fate of Mr. Munro, who was killed by a tiger in the East Indies, in the year 1792. "We went," says the narrator, "on shore on Sangar Island to shoot deer, of which we saw innumerable tracks, as well as of tigers; notwithstanding which we continued our diversion till nearly three o'clock, when sitting down by the side of a jungle to refresh ourselves, a roar like thunder was heard, and an immense tiger seized on our unfortunate friend, and rushed again into the jungle, dragging him through the thickest bushes and trees, every thing giving way to his monstrous strength: a tigress accompanied his progress. The united agonies of horror, regret, and fear, rushed at once upon us. I fired on the tiger—he seemed agitated; my companion fired also, and in a few moments after this our unfortunate friend came up to us bathed in blood. Every medical assistance was vain, and he expired in twenty-four hours, having received such deep wounds from the teeth and claws of the animal as rendered his recovery hopeless. A large fire, consisting of ten or twelve whole trees, was blazing by us at the time this accident took place, and ten or more of the natives were with us. We had hardly pushed our boat from that accursed shore, when the tigress made her appearance, almost raging mad, and remained on the sand all the while we continued in sight.

The tigress, like the lioness, produces four or five young ones at a litter. In a wild state she is always furious, but her rage rises to the utmost extremity when robbed of her offspring. She then braves every danger, and pursues her plunderer with a degree of ferocity which is indescribable.

We refer our readers to the first part of this work, in which we make mention of the extraordinary union of a tigress and a lion, and of their producing young, which continue to thrive, and in their outward appearance seem to bear an equal resemblance to their sire and their dam.

A litter of young tigers is also at present in this country, in the itinerant collection of Mr. Atkins.



THE ALLIGATOR

In the Royal Menagery Tower of London

THE ALLIGATOR,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The animals of the lizard tribe, which have each four legs and a tail, are distinguishable, at first sight, from other oviparous quadrupeds. They have no shields like the tortoises, and they are all furnished with tails, which are entirely wanting in toads and frogs. Their bodies are either covered with scales of greater or less rigidity, or with a kind of warts, or tubercles. Some of the species are scarcely more than two inches in length, whilst others exceed even the length of five or six and twenty feet.

The principal distinction betwixt the alligator and the crocodile is, that the former has its head and part of the neck more smooth than the latter, and that the snout is considerably more wide and flat, as well as more rounded at the extremity. The length of the full grown alligator is from seventeen to twenty feet.

The alligators are natives of the warmer parts of America, but it was by an accidental occurrence that these inhabitants of the New World obtained their appellation. Had the first navigators seen any object that more resembled their form than a lizard, they would probably have adopted the name by which the Indians call them, *Cayman*, but the Spanish sailors remarking their great resemblance to the lizard, they called the first of them which they saw, *Lagarto*, or Lizard. When our countrymen arrived in America, and heard that name, they called the creature a *Lagarto*, whence was afterwards derived the word *Alligato*, or *Alligator*.

Alligators deposit their eggs, like the crocodiles and turtles, at two or three different periods of the year, laying from twenty to about twenty-four at each time. It is said that those of Cayenne and Surinam raise a little hillock on the bank of the water, and hollowing this out in the middle, amass together a heap of leaves and other vegetable refuse, in which they deposit their eggs. These being also covered with leaves, a fermentation ensues, by the heat of which, in addition to that of the atmosphere, the eggs are hatched. The animals generally lay their eggs in the month of April, multitudes of which are, however, destroyed by vultures, and immense numbers of the young animals are devoured as soon as they reach the water, by various species of fish.

Alligators are often seen floating on the surface of the water, like logs of wood, and are mistaken for such by various animals, which, by this means, they surprise and draw underneath to devour at leisure. They are said also sometimes to form a hole in the bank of a river, below the surface of the water, and there to wait till the fish that are fatigued by the strong current come into the smooth water to rest themselves, when they immediately seize and devour them. But as they are not able to obtain a regular supply of food, from the fear in which they are held by all animals, and the care by which these in general avoid their haunts, they are able to sustain a privation of it for a great length of time. When killed and opened, stones and other hard substances are generally found in their stomach. In many that Mr. Catesby examined there was nothing but mucilage and pieces of wood, some of which weighed seven or eight pounds each. The angles of them were so worn down, that he fancied they must have lain in the stomachs of the animals for several months. Two alligators that Dr. Brickell saw killed in North Carolina, had in their bellies several sorts of snakes, and some pieces of wood, and in one of them was found a stone that weighed about four pounds.

The voracity of these animals is so great that they sometimes do not spare even mankind. A short time before M. Navarette was at the Manillas, he was told that as a young woman was washing her feet in one of the rivers, an alligator seized and carried her off. Her husband, to whom she had been but that morning married, hearing her screams, threw himself headlong into the water, and with a

dagger in his hand pursued the robber. He overtook and fought the animal with such success as to recover his wife, but unfortunately for her brave reseuer, she died before she could be brought to the shore.

On the other hand, however, we are informed by Dampier, that the alligators about the Bay of Campeachy, probably from their having a full supply of food, are by no means so ferocious as they are represented to be in other places. He never knew them attack a man, but he has often seen them run away from the sailors. He has drank out of a pond full of them, where the water was not deep enough even to cover their backs, and the pond itself was so small that he could get no water but by going within two yards of an alligator's nose, the animals lying all the while with their heads towards him. Dampier and some of his men were one day passing through a swamp, two or three feet deep in water, when they perceived the strong musky scent of an alligator. Presently afterwards he stumbled over one of these animals, and fell down; he called out loudly to his companions for assistance, but they ran off as fast as their legs could carry them towards the woods. He had no sooner recovered himself than he stumbled over the animal a second and afterwards a third time, but at last he got off in safety. This adventure, however, had such an effect upon him, that he never again went through any extensive water whilst he remained in the Bay of Campeachy.

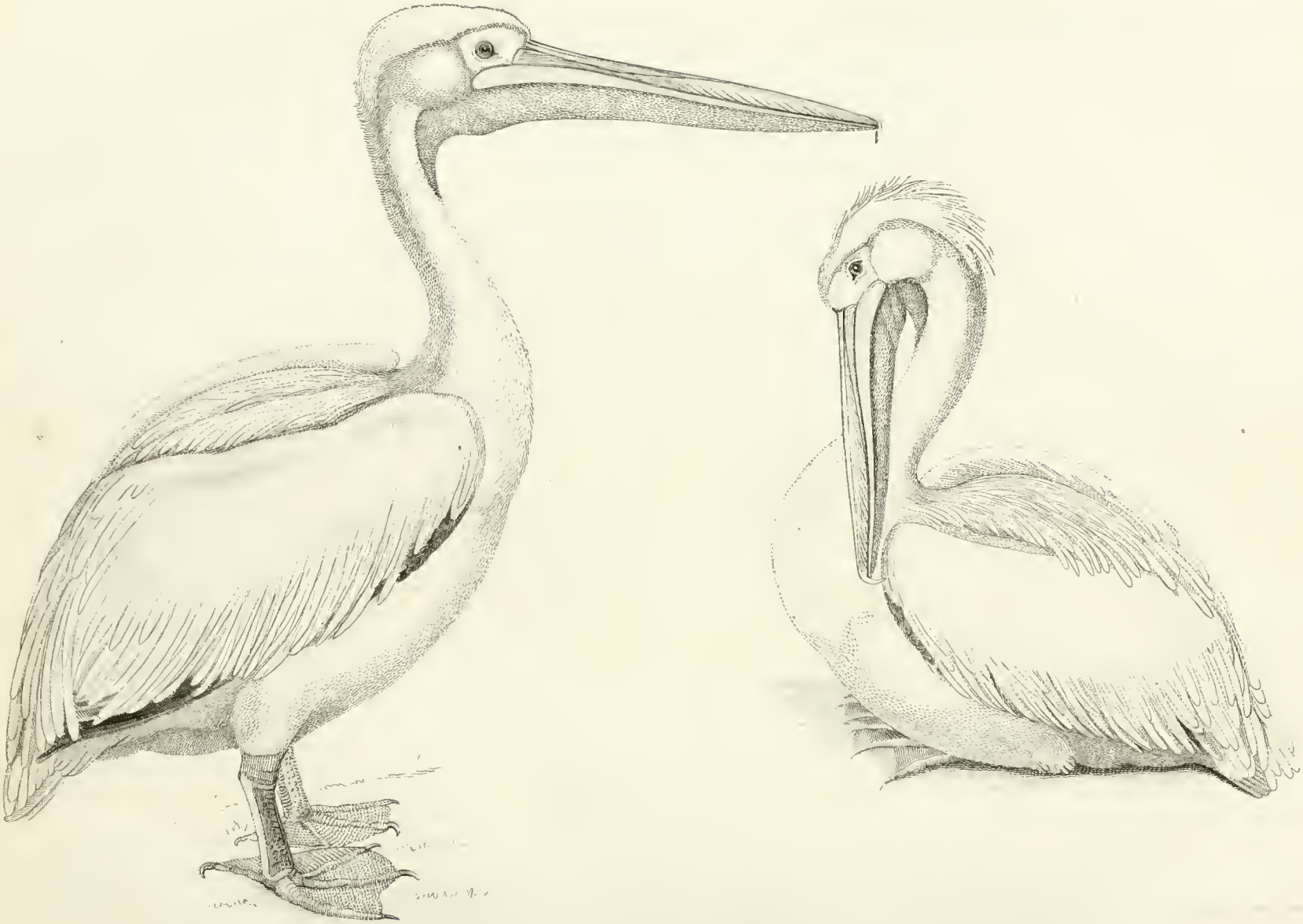
The voice of these animals is very loud and dreadful, and they have an unpleasant and powerful musky scent. M. Pagés says, that near one of the rivers in America, where the alligators were numerous, their effluvium was so strong as to impregnate his provisions, and even to give them the nauseous taste of rotten musk. This effluvium proceeds chiefly from four glands, two of which are situated in the groin, near each thigh, and the other two at the breast, one under each fore leg. Dampier informs us, that when his men killed an alligator, they generally took out these glands, and after having dried them, wore them in their hats by way of perfume.

It appears that the alligator, when caught young, may in some measure be domesticated. Dr. Brickell saw one in a large pond before a planter's house. It remained there nearly half a year, during which time it was regularly fed with the entrails of fowls and raw meat. It frequently came into the house, where it would remain for a short time, and then return again to its shelter in the pond. It is supposed at last to have stolen away to a creek near the plantation, for it was one day missing, and from that time was never afterwards seen.

When alligators are very numerous, they will sometimes endeavour to get into the canoes or boats that pass their haunts during the night. M. de la Borde of Cayenne, says, he has often seen them attempt to raise themselves against the sides of small boats in that river. He informs us also that the alligators which inhabit the lakes of South America are sometimes left dry, in consequence of the water evaporating. In this case, they subsist by catching birds or land animals, or even live a long time without food.

The teeth of the alligator are as white as ivory, and snuff-boxes, chargers for guns, and several kinds of toys, are manufactured from them. The flesh of the young animals is said to be white, and tolerably palatable, but that of the old ones, although it is eaten by many of the American tribes, is, from its strong scent, extremely unpleasant to an European palate.

As Providence seems to have appointed the lion to the dominion of the immense deserts of the Torrid Zone, the eagle to ride as sovereign of the air, and has committed the government of the seas to the whale, so it seems to have appointed the crocodile and the alligator to rule over the shores of the immense rivers of tropical climates. Living, as it were, in the confines both of land and water, these enormous animals extend their dominion equally over the inhabitants of both elements. Here they enjoy an absolute rule, and dread none of the common dangers which assault other less powerful animals.



THE PELECANS

At the Royal Menagery Tower of London

THE PELECANS,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The Pelecan may be considered as one of the largest of the water-birds, being, when full grown, larger than a swan, and measuring from five to six feet between the extremity of the bill and that of the tail, and from ten to twelve between the tips of the expanded wings. The bill is about sixteen inches long, and the skin between the sides of the lower mandible is very flaccid and dilatable, extending eight or nine inches down the neck; the skin is bare of feathers, and is capable of containing many quarts of water; the tongue is so small as scarcely to be distinguishable; the sides of the head are naked, and on the back of the head there is a kind of crest. With the exception of the quill-feathers of the wing, which are black, slightly streaked with white, the plumage is a very delicate flesh colour, occasionally varied by tinges of a darker hue: the upper mandible is of a dull-yellow in the middle, with a reddish tinge towards the edges. The pouch is of a bright straw-colour.

The bag, or pouch, in the lower mandible of the bill of the pelecan is one of the most remarkable members that presents itself in the structure of any animal. Although it wrinkles up nearly into the hollow of the chap, and the sides to which it is attached are not, when in a quiescent state, above an inch asunder; still it may be extended to an amazing capacity, and when the bird has fished with success, its size is almost incredible; it will contain a man's head with the greatest ease. In fishing, the pelecan fills this bag, but does not immediately swallow its prey; having filled its pouch with the spoil, it flies to the land, and there devours it at its leisure. It is not long in digesting its food, for it has generally to fish more than once in the course of the day. Buffon says, that they exhibit considerable skill in their manœuvres to catch the finny tribe, as they form themselves into a circular line, and gradually narrowing the extent of the space inclosed, until they have driven the fishes into so small a compass as to render them a certain prey, then, at a given signal, they all at once plunge into the water, and seize upon their terrified victims.

At night, when the toils of their fishery are over, these birds, which are lazy and indolent when they have glutted themselves with fish, retire a little way on the shore to take their rest for the night. Their attitude in that state is with their head resting against their breast; they remain almost motionless till hunger calls them to break off their repose: thus they pass nearly the whole of their life in eating and sleeping.

For what reason the ancients attributed to this stupid bird the admirable qualities and parental affections for which it was celebrated amongst them, we are wholly at a loss to divine, unless it were that, being struck with the extraordinary figure of the bird, they were desirous of supplying it with propensities equally wonderful. For, in fact, the pelecan is one of the most heavy, sluggish, and voracious of all the feathered tribes, and is but ill fitted to take those vast flights, or to make those cautious provisions which have been so fancifully ascribed to it.

The female feeds her young ones with fish macerated for some time in her pouch; and it was perhaps the appearance of the bird when in the attitude of feeding, with the bloody spot on the tip of its bill closely pressed against the delicate plumage of its breast, that gave rise to the fabulous notions which have been circulated about this bird, and by which it has obtained a character which it does not in reality deserve.

Labat informs us, that he caught two pelecans when young, and tied them by the leg to a post stuck into the ground, and he had the pleasure of seeing one of the old ones come for several days to feed

them, remaining with them the greater part of the day, and passing the night on the branch of a tree that hung over them*. By this means they all three became so familiar as to suffer themselves to be handled, and the young ones always took the fish that he offered them, stowing it at first in their bag, and then swallowing it at leisure. The pelecan, however, has often been rendered domestic; and the same writer informs us, that he saw one amongst the Americans so well trained, that it would at command go off in the morning and return before night, having its pouch distended with prey, part of which it was made to disgorge, and the rest it was permitted to retain for its trouble.

According to the account of Faber, a pelecan was kept in the court of the Duke of Bavaria above forty years. He says, that it seemed fond of being in the company of mankind, and that when any one sang or played on an instrument it would stand perfectly still, turn its ear to the place, and with its head stretched out, would seem to pay the utmost attention. We are further told, that the Emperor Maximilian had a tame pelecan that lived more than eighty years, and always attended his soldiers when on their marches.

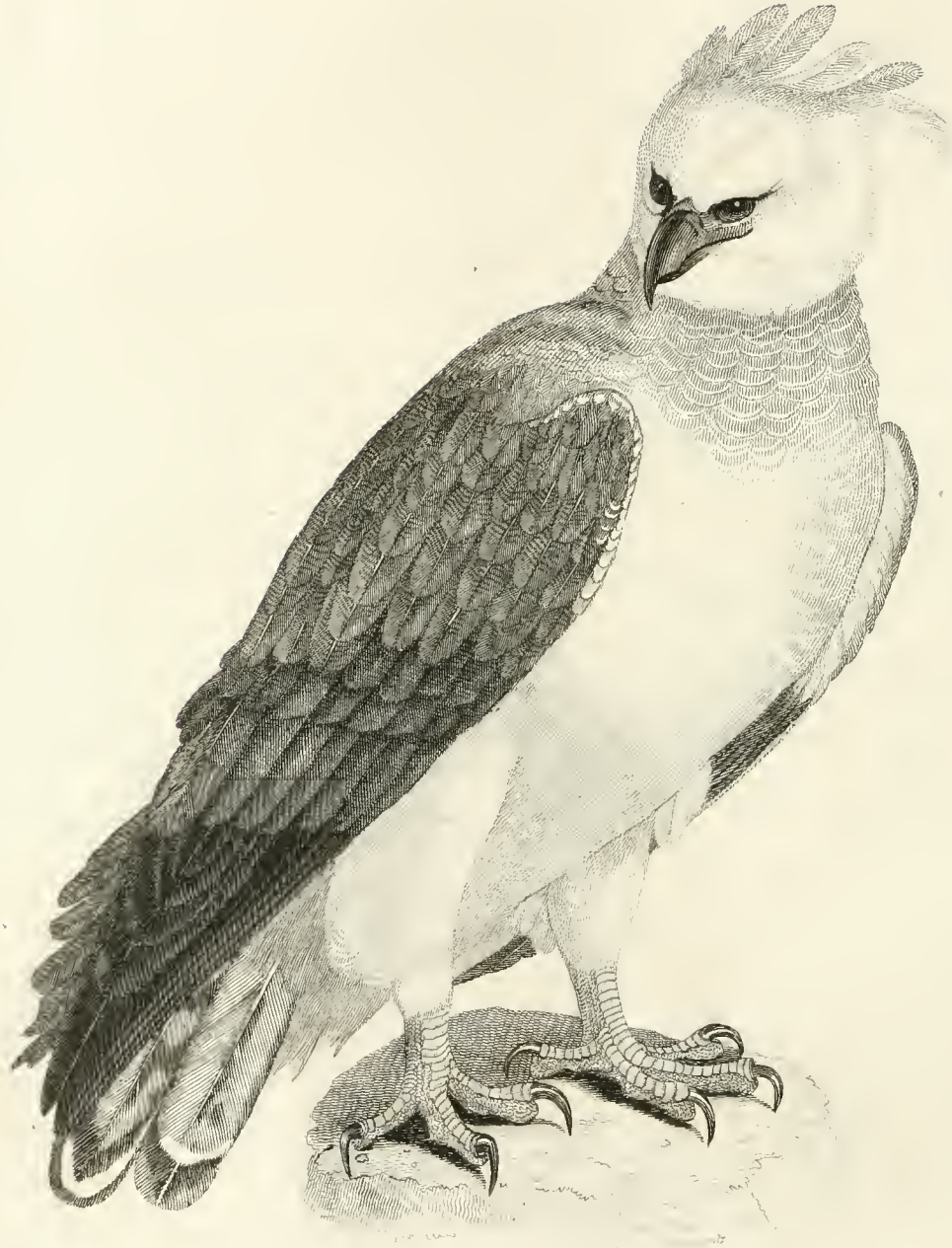
Notwithstanding, however, the many exaggerated stories that have been related of the extraordinary affection of the pelecan, it is still certain that it exhibits a higher degree of attachment, not only towards its young ones, but also towards its species in general, than any other aquatic bird that we are acquainted with. Clavigoro, in his History of Mexico, says, that sometimes the Americans, in order to procure without trouble a supply of fish, cruelly break the wing of a live pelecan, and after tying the bird to a tree, conceal themselves near the place. The screams of the miserable bird attract other pelecans to the place, which, he assures us, eject a portion of the provisions from their pouches for their imprisoned companion. As soon as the men in their ambush observe this, they rush to the spot, and after leaving a small quantity for the bird, carry off the remainder.

When the cormorants and the pelecans are together, they are said to have a very singular method of taking fish. They arrange themselves in a large circle, at some distance from land, and the pelecans flap with their extensive wings above the surface, while the cormorants dive beneath. By this means the fish contained in the circle are driven before them towards the land, and as the circle lessens by the birds coming closer together, the fish at last are brought into a small compass, when their pursuers find no difficulty in filling their bellies. In this exercise they are often attended by various species of gulls, which likewise obtain a share of the spoil.

The pelecan is found in nearly all parts of the globe, but seldom in the North of Europe. The birds which form the subject of our engraving are reported to be from Hungary, and they appear to be perfectly reconciled to their place of confinement. If you present your arm to them they snap at it with their bill, but their gripe is scarcely perceptible. They are allowed daily to take an airing in the court-yard, where they are refreshed by a copious bathing, from which they seem to derive great pleasure. Towards the close of the year 1828, the female laid three eggs, building for herself a very comfortable nest in one of the corners of their cage. Considerable hopes were excited that the eggs would be hatched, as they would then have been the first that had ever been hatched in England, but those hopes were frustrated, although the female never neglected her eggs, not even for the purpose of feeding, as she was regularly supplied during incubation by her partner, who, apparently conscious that another depended on him for support, usually crammed his pouch with a double quantity, and then very affectionately proceeded to discharge a certain proportion of it into the throat of his partner.

The pelecans in the Tower are generally allowed about thirty or forty small fish, generally flounders or dabs, per day.

* We give this fact as it is stated by Labat, at the same time that we cannot attach implicit credence to it. The very circumstance of an aquatic bird, web-footed, roosting on a tree, when it might have been made to stand during the whole of the night by its young, subjects the author to the serious charge of falsification.



THE EAGLE OF THE ANDES.

In the Royal Menagery Tower of London

THE EAGLE OF THE ANDES.

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The eagle has always been considered as the *celestial bird*, and was regarded by the ancients in their auguries as the messenger of Jupiter. In several points, both physical and moral, he resembles the lion. Both are alike distinguished by their strength, and hence the eagle extends his dominion over the birds, as the lion over the quadrupeds. Both disdain the possession of that property which is not the fruit of their own industry, and they reject with contempt the prey which is not procured by their own exertions. The eagle seldom devours the whole of its game; but, like the lion, leaves the fragments and offals to other animals. Like the lion also, he is solitary,—the inhabitant of a desert, over which he reigns supreme, and excludes all the other birds from his select domain. It is more uncommon perhaps to see two pair of eagles in the same tract of the mountain, than two families of lions in the same part of the forest. They separate from each other at such wide intervals, as to afford ample range for subsistence, and esteem the value and extent of their kingdom to consist in the abundance of the prey with which it is replenished.

The external appearance of the eagle is powerful and majestic. His bill and claws are crooked and formidable, and his figure corresponds to his instinct. His body is robust; his legs and wings are strong; his flesh hard; his bones firm; his feathers stiff; his attitude bold and erect; his movements quick; his flight rapid. He can distinguish objects at an immense distance; but his sense of smell is inferior to that of the vulture. By means of his exquisite sight, he pursues his prey, and when he has seized it, he checks his flight, and places it upon the ground, to examine its weight, before he carries it off. Though his wings be vigorous, yet, his legs being stiff, it is with difficulty that he can rise, especially if he be loaded. He bears away geese and cranes with ease, and frequently carries off hares, lambs, and kids. When he attacks fawns and calves, he instantly gluts himself with their blood and flesh, and afterwards transports their mangled carcases to his eyry (so his nest is called), which is quite flat, and not hollow like that of other birds. He commonly places it between two rocks, in a dry inaccessible place. It has been stated by certain naturalists, and particularly by Buffon, that the same nest serves the eagle for the whole course of his life. It is indeed a work laborious enough not to be repeated, and solid enough to last for a considerable time. It is constructed nearly like a floor, with small sticks, five or six inches long, supported at the extremities, and crossed with pliant branches, covered with several layers of rushes and heath. The nest is several feet broad, and so firm, as not only to receive the eagle, the female and young, but to bear the weight of a large quantity of provisions. It is not covered above, but is sheltered by the projection of the upper part of the rock. In the middle of this structure the female deposits her eggs, which seldom exceed two, and the period of incubation is thirty days. It is, however, a curious characteristic of the bird, that if it lays three eggs, one of them generally proves addle, at least it is a very rare circumstance indeed to find three eaglets in a nest. By some naturalists it is pretended, in order to account for the limited number of the young, that the mother destroys the weakest or the most voracious of her infant brood. An excessive scarcity of provisions can alone occasion this unnatural treatment. The parents, not possessing a sufficiency for their own support, endeavour to reduce the members of their family, and when the young are able to fly, and in some degree to provide for themselves, they expel them from their natal abode, and never suffer them to return.

There is a singular property common to all the birds of prey, that the female is stronger and a

third larger than the male, exactly the reverse to what presents itself to our view in the quadrupeds, and even in other birds. In fishes and insects the female is, indeed, larger than the male, and this is owing to the immense number of eggs, which swell their bodies, but this reason will not apply in the case of birds.

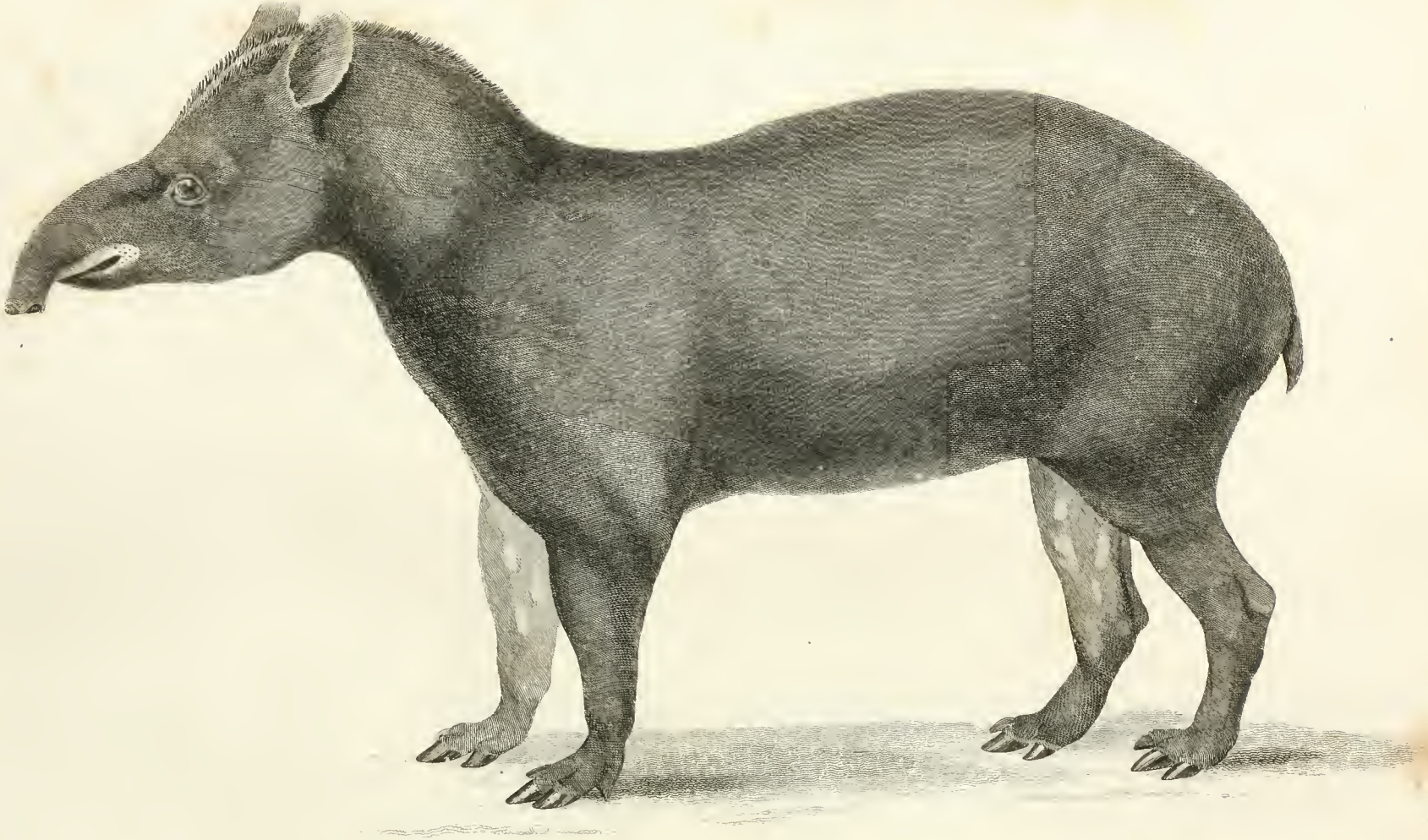
All the birds of rapine fly in a lofty course. Their legs and wings are strong; their sight exceedingly quick; their head thick; their tongue fleshy; their stomach single and membraneous; their intestines narrower and shorter than in other birds; they prefer the solitary tracts, the desert mountains, and they commonly breed in crags or in the tallest trees. Many species inhabit both continents, and some appear to have no fixed abode. Their generic characters are, that their bill is hooked, and that they have four toes on each foot, all of which are distinctly parted. The eagle's head is covered with feathers, which distinguishes it from the vulture, and both these are again discriminated from the hawks, buzzards, kites, and falcons, by an obvious property, for their bill continues straight to a certain distance before it bends, but in the latter it assumes its curve at the origin.

The longevity of the eagle is said to be very great, extending sometimes beyond a century, and then its death is not so much occasioned by extreme age as by the inability to take food, the bill growing so much curved as to become useless. However, it has been observed, that eagles kept in confinement occasionally sharpen their bill, and that its increase is for several years imperceptible. It has also been remarked, that they feed upon every kind of flesh, and even upon that of other eagles. When they cannot procure flesh, they greedily devour bread, serpents, lizards, &c. If they be not supplied regularly with food, they will attack dogs, cats, and even men who come within their reach. At intervals they pour forth, in an equable strain, their shrill, loud, and lamentable notes. The eagle drinks seldom, and perhaps not at all when in perfect liberty, because the blood of his victims is sufficient to quench his thirst.

In the state of nature, the eagle never engages in a solitary chase, but when the female is confined to her eggs or her young. This is the season when the return of the birds affords plenty of prey, and he can with ease provide for the sustenance of himself and that of his mate. At other times, they unite their exertions, and they are always seen close together, or at a short distance from each other. The inhabitants of the mountains, who have an opportunity of observing their manœuvres, pretend that the one beats the bushes, while the other, perched on a tree or rock, watches the escape of the prey. Often they soar beyond the reach of human sight, and, notwithstanding the immense distance, their cry is still heard, and resembles the barking of a small dog. Though a voracious bird, the eagle, especially in captivity and deprived of exercise, can endure for a long time the want of sustenance. It is on record, that a common eagle, caught in a fox-trap, passed five whole weeks without the least food, and that it did not appear sensibly weakened till towards the last week.

Although the eagles in general prefer desert and mountainous tracts, they are seldom found in narrow peninsulas or in islands of small extent. They inhabit the interior country on both continents, because islands are commonly not so well stocked with animals. It is true that eagles make their incursions into islands, but they never fix their residence there, nor do they ever there lay their eggs.

The nomenclators reckon fifteen species of the eagle, eleven of which are natives of Europe, one of Africa, one of the East Indies, and two of South America. The subject of the present sketch belongs to the latter, and is chiefly found on the highest range of the Andes. In its plumage it is distinguished from all the other species, by its wings being of a greyish dusky colour, and the remainder of the body white: independently of which it has, on the crown of its head, a tuft of feathers, black and white, which can be raised or depressed at pleasure. The quill feathers are of a deeper colour than the others in the wing, but the outer edges of the feathers are light brown. It is in size not so large as the European eagles, but in its habits and general characteristics no essential difference appears to exist.



THE TAPIR.

In the Royal Menagery Tower of London

THE TAPIR,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The tapir belongs to the order Belluæ, of which it forms the third genus. It is called by the Portuguese *anta*, by others *elan* and *sus aquaticus*, and in the tenth edition of the Linnæan system, it is styled the *hippopotamus terrestris*. Its generic characters are ten cutting-teeth in both jaws; the canine ones single and bent; five broad grinders on each side of both jaws. The fore-feet have four hoofs or toes, whereas the hind-feet have only three; the tail very short; the ears erect and oval, bordered with white; the eyes small; the nose extending far beyond the lower jaw, slender, and forming, in the male, a sort of proboscis capable of being contracted or extended at pleasure. The sides are sulcated. The nose of the female is destitute of this proboscis, and the jaws are of equal length. This circumstance is however doubted by Sonnini.

Similar to an overgrown hog, this quadruped is commonly about six feet in length, and three and a half in height. When young, it is spotted with white; but when old, it is of a brown dusky colour. The hairs in the back are remarkably close, short, and fine; and those of the mane are black and stiff, and about an inch and a half long.

It lives in thick woods on the eastern side of South America, from the isthmus of Darien to the river of the Amazons. It sleeps, during the day, in the thickest and darkest forests adjacent to the banks, and goes out in the night-time in search of food. It feeds on vegetables, and is particularly fond of the stalks of the sugar-cane and fruits. If disturbed, it takes to the water; it swims very well, or it sinks below, and, like the hippopotamus, walks on the bottom as on dry ground.

The tapir is of a very mild nature, and capable of being made very tame. In Guiana it is sometimes kept and fed with other domestic beasts in the farm-yard. It feeds itself with its nose, making use of it as the rhinoceros does its upper lip. It knows its master, who brings it its food, and will take any thing that is offered to it. It will often rummage the pockets of strangers with its nose for meat. Its common attitude is sitting on its rump like a hog. Notwithstanding its mild nature, Gumilla says, that, if attacked, it will make a vigorous resistance, and scarcely ever fails to tear off the skin from the dogs they get hold of.

The natives of the country where the tapir is common eat its flesh, which by some travellers is represented as very palatable, and by others as scarcely eatable. The Indians shoot it with poisoned arrows, and cut the skin into bucklers. It is very salacious, slow-footed, and sluggish, and makes a kind of hissing noise when attacked.

Monsieur Bajon, a surgeon at Cayenne, communicated some very good observations on this animal to the French Academy of Sciences. On opening this animal, he says, the first thing that struck me was that it was a ruminating animal, though the feet and teeth have no analogy with those of other ruminating animals, yet the tapir has three receptacles or stomachs, which are commonly full, and especially the first, which is filled like a balloon. This stomach answers to the first stomach of the ox, but here the cancellated or honeycomb part is not distinct, but the two parts form one cavity. The second or next stomach is the plaited or laminated one, which is also very considerable, and much resembles that of an ox, with this difference, that the laminæ or plaits are much smaller, and the coats much thinner. Lastly, the third stomach is the least, and the thinnest, and has only simple rugæ in

its interior, and it is almost constantly found full of completely-digested aliment. The intestines are not very large, but are very long, and the scybola resemble those of a horse.

On this subject, Buffon says, I am obliged to contradict a part of this account of Monsieur Bajon, and to affirm that the tapir is not a ruminant animal. We had lately here a tapir, which bore its voyage well, and was stationed near Paris, but which happened to die not long after. Of this event I had timely notice, and I requested M. Mertrud to open the animal and examine its structure. This dissection was made in my presence, and instead of three stomachs as described by M. Bajon, we found only one, the size of which was indeed very large, and straitened or contracted in two places, but was still a single viscus, and not consisting of three distinct and separate stomachs as represented in M. Bajon's account. Yet it is not astonishing that he should have fallen into this error, since one of the most celebrated naturalists of Europe, Dr. Tyson, of the Royal Society of London, fell into a similar error in dissecting the Peccari or Tugossu of America. This mistake, however, of Monsieur Bajon does not prevent us from acknowledging that his memoir contains many excellent observations and remarks. The female, he observes, is always smaller than the male, and has a weaker or less piercing voice. One of the females which he dissected was six French feet in length, and appeared to have produced young. Its teats were two in number, and resembled those of the ass. The tapir is far from deserving the name of an amphibious animal, being continually on the surface of the ground, near the sides of hills, and in dry places; and if it occasionally frequent marshy ground, it is chiefly in quest of sustenance, and because it finds there a greater quantity of vegetables than in more elevated spots; but as it daubs itself much during its wanderings in such places, it goes every morning and evening in search of some river or lake, in which it may swim and wash itself. Notwithstanding its clumsy appearance, the tapir swims extremely well, and dives most readily, but cannot continue longer under water than any other terrestrial quadruped, and is obliged every now and then to put out its trunk in order to respire. When pursued by dogs, it runs, if possible, to some river, which it crosses, and thus eludes their pursuit. It does not prey on fish, its only nourishment being vegetables.

From the above history of the tapir, it will sufficiently appear, that although ranked under a distinct genus, the animal has in some particulars a considerable affinity to the hippopotamus.

THE RACCOON

THE RACCOON,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The raccoon is a native of the New World, and is principally an inhabitant of the northern parts of that continent. It is also found in some of the West India Islands. Its colour is grey; the face white; the eyes each embedded in a large patch of black, which forms a kind of band across the forehead, and is crossed by a dusky stripe running down the nose. The visage is shaped like that of a fox, and is sometimes known by the name of the Jamaica rat. The forehead is broad, and the snout sharp; the eyes are large and greenish; the ears short and slightly rounded; and the upper jaw is longer than the lower; the tail, which is covered with bushy hair, tapers to the end, and is annulated with several black bars; the body is broad; the back arched; the limbs rather short; and the fore-legs shorter than the hinder. The animal is covered with thick and long hair, which has somewhat of an upright growth. The feet are dusky, and have five toes with very sharp claws.

The colour of the raccoon, which is generally a dark grey, sometimes varies, and has a fulvous or tawny tinge, especially on the lower parts, and Mr. Pennant mentions a variety entirely of a cream colour.

The length of the animal is two feet from nose to tail, and the tail about one foot. The food of the raccoon, in its wild state, consists chiefly in maize, which it eats while the ears are tender, as well as sugar-canes, various sorts of fruits, as apples, chestnuts, &c. It is also supposed to devour birds and their eggs, and is, therefore, considered an enemy to poultry. It chiefly feeds by night, and by day keeps in its hole, except in dull weather. In winter, and in very bad weather, it keeps altogether within, and is popularly believed to live, like the bear, by sucking its paws. In the domestic state, it evinces much of the restlessness of the monkey tribe, and is very minute in the examination of everything. It has a kind of oblique gait in walking, can climb and leap with great ease, and is very frequently seen on trees. It is easily tamed, and is frequently kept in houses by the Americans, and will live on bread, milk, fish, eggs, &c. It is particularly delighted with sweets of every kind, and has as great a dislike to acids. In eating, it generally sits on its hind legs, and uses its fore-feet in the manner of hands. It has a way of dipping all manner of dry food that is given to it into water before it eats it, as well as of rolling it between its paws for some time. When it kills birds, it proceeds exactly in the manner of a polecat, first biting off the head, and then sucking out the blood. It drinks but little, and is a very clean animal. It is extremely expert in opening oysters, on which, as well as on crabs and various kinds of shell-fish, it frequently feeds in its wild state. It is, when tamed, extremely active and playful, but is of a capricious disposition, and not easily reconciled when offended. When angry, its voice is like a hoarse bark, and at other times soft and sharp. In its wild state, it generally inhabits the hollows of trees; but, in a domestic state, shews no particular inclination for warmth; nor is it observed to be desirous of lying on straw or any substance in preference to the bare ground. It sleeps from about midnight till noon, at which time it comes out for food and exercise. According to Linnæus, the raccoon has a wonderful antipathy to hog's bristles, and is much disturbed at the sight of a brush. It produces from two to three young at a birth; this commonly takes place in the month of May. The fur of the raccoon is used by the hatters, and is considered as next in merit to that of the beaver.

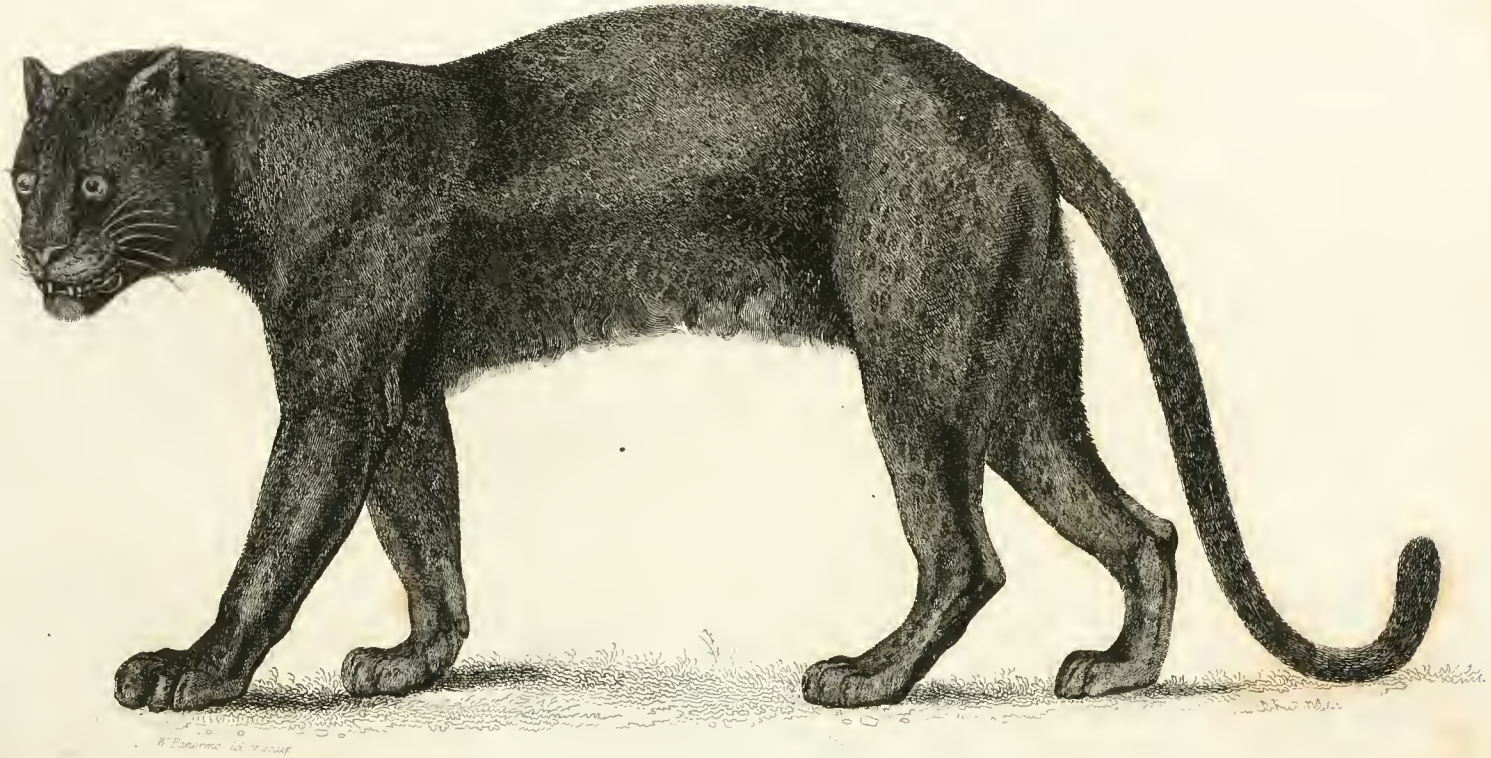
M. Blanquart des Salines had a raccoon, of which he gave the following particulars to M. Buffon.

Before it came into his possession, it had always been chained. In this state of captivity it was always very gentle, but exhibited little attachment to any one. The chain of this raccoon was sometimes broken, and on such occasions liberty rendered him insolent. He took possession of an apartment which he would allow no one to enter, and it was with some difficulty that he could again be reconciled to bondage. When permitted to be loosened from confinement, however, he would express his gratitude by a thousand caressing gambols. But this was by no means the case when he effected his own escape; he would then roam about sometimes for three or four days together upon the roofs of the neighbouring houses; descend during the night into the court-yards, enter the hen-roosts, strangle all the poultry, and eat only their heads. His chain rendered him more circumspect, but by no means less cruel. When he was in confinement, he employed every artifice to make the fowls grow familiar with him; he permitted them to partake of his victuals, and it was only after having inspired them with the greatest notions of security that he would occasionally venture to seize one of them and tear it in pieces. Some young cats met with a similar fate.

He used to open oysters with wonderful dexterity. His sense of touch was exquisite, for in all his operations he seldom used either his nose or his eye. He would pass an oyster under his hind paws, then, without looking at it, search with his fore-paws for the weakest part of it; then sinking his claws, he would separate the shells, and leave not a vestige of the fish. Whatever food he ate, he used (as indeed do the whole species) to soften or rather dilute in water by immersing it in the vessel that contained the water for him to drink.

He was extremely sensible of ill-treatment. A servant one day gave him several lashes with a whip, and the man could never afterwards accomplish a reconciliation. Neither eggs nor fish, of which he was exceedingly fond, could appease his resentment. At the approach of this servant, he always flew into a rage; his eyes kindled, he endeavoured to spring at the man, uttered the most dolorous cries, and rejected everything that was presented to him till the man went away. This animal disliked children; their crying irritated him, and he made every effort to spring upon them. A small dog, of which he was fond, he chastised severely when it barked too loud.

Briskell, speaking of the partiality of the raccoon for shell-fish, says "that it will watch the opening of the shell, dexterously put in its paw, and tear out the contents; sometimes, however, the oyster suddenly closes, catches the thief, and detains him till he is drowned by the return of the tide." They feed likewise on crabs, in the taking of which they exhibit much cunning. On this head the above-mentioned traveller relates, "that the raccoon will stand by the side of a swamp, and hang its tail into the water; that the crabs, mistaking this for food, lay hold of it, and as soon as the beast feels them pinch, he pulls them out with a sudden jerk and devours them." A species of land-crab, found in the holes of the sand in North Carolina, are frequently the food of the raccoon. He catches them by putting one of his fore-paws into the ground and hauling them out. The Negroes frequently eat the flesh of the raccoon, and are very fond of it.



THE BLACK LEOPARD

In the Collection of M. Wombell

THE BLACK LEOPARD,

IN THE COLLECTION OF MR. WOMBWELL.

In a former part of this work we entered into a description of the common leopard, such as he is represented generally in the menageries of this country: the animal which forms the subject of our present sketch can only be considered as a distinct species, but possessing in every particular the generic character of the African and Indian leopard.

The black leopard is a very rare animal in this country, and forms a very distinguished ornament of the collection of Mr. Wombwell; a specimen of the same species was brought to this country by the late Warren Hastings, from Bengal, and was confined for some time in the Tower.

On the first examination of this animal, it appears rather to belong to the panther species than the leopard, and, in fact, the characteristics are so indecisive, and so confounded, that a positive distinction cannot be laid down.

As a part of natural history, the nice distinction between the ounce, the panther, and the leopard has generally involved the zoologist in error, and, therefore, it may not be uninteresting to investigate how far the shades of difference exist, and thereby arrive at a positive knowledge of the respective characters of the three species of animals.

The leopard and its affinities may be considered the inhabitants of the Old Continent, and are known to naturalists by the name of the panther, the ounce, and the leopard. The first species is that which was known amongst the Greeks by the name of *pardalis;* to the ancient Romans by the name of *panthera;* and to the modern Latins, by that of *leopardus.* This animal, when it has attained its full size, is about five or six feet in length from the extremity of the muzzle to the origin of the tail, which in length generally exceeds two feet.

The second species is the lesser panther of Oppian, to which the ancients gave no particular name, but which modern travellers have designated by the name of ounce, from the corrupted word lynx or lunx. It is much smaller than the panther, its body being only three feet and a half in length. Its hair is longer than that of the panther; the tail is also longer, being sometimes more than three feet. The ground colour of the ounce is a whitish-grey on the back and on the sides of the body, and of a grey, still more inclining to white on the belly, whereas the back and the sides of the body of the panther are always of a fulvous yellow, of a lighter or deeper shade; the spots are nearly of the same form, and of the same size as those of the panther.

The third species, of which the ancients make no mention, is an animal of Senegal, of Guinea, and other countries not discovered by the ancients. It is generally known by the name of leopard, which has also been erroneously given to the great panther. It is rather larger than the ounce, but much less than the panther, and for this reason the animal now under our consideration ought more properly to be considered as an once than a leopard. Oppian was acquainted with the two species of the ounce and the panther; but he styles the ounce a species of panther, resembling each other in the form of their body, and in the variety and disposition of their spots, but differing in the length of their tail.

The Arabs designate the great panther by the name of *Al Nemer*, and the lesser one, or the ounce, by that of *Al Phet* or *Al Fhed.* The latter name, although somewhat corrupted, may be considered as synonimous with *Faadh*, by which name the animal is actually known in Barbary. The *Faadh*,

says Dr. Shaw, has a great resemblance to the leopard (he should have said the panther), as they resemble each other in their spots, but in other respects they are somewhat dissimilar, the skin being of a darker fulvous colour, and of a coarser texture; nor in their nature are they so ferocious.

We further find in a passage of Albert, and which has been commented upon by Gesner, that the *Phet* or *Fhed* of the Arabians, is called, in Italian, and some other European languages, *Leanza* or *Lonza*. No doubt therefore can exist that the lesser panther of Oppian, the *Phet* or *Fhed* of the Arabians; the *Faadh* of the natives of Barbary, and the ounce of the Europeans, is the same animal. There is also a great probability that it is also the *Pard* or *Pardus* of the ancients, and the *Panthera* of Pliny; and that subsequently the larger panther was called leopardus, because it was supposed to be a mongrel production which had arisen by a fortuitous intercourse with the lion.

Another striking difference between the ounce and the panther is the rotundity of its form—the former is generally plump, sleek, and fat; whilst the latter is bony, meagre, and the texture of the hair is coarse and stiff. The colour of the skin also differs a little in the two animals; but in this respect, the distinction between the leopard is more striking; the colour of the latter animal is much brighter, the spots are not so deep nor so large, and they are in general so disposed in groupes, as if each of the spots were formed by a union of four others.

Pliny and many other subsequent writers have affirmed that, in the panther species, the skin of the female is whiter than that of the male; and this may indeed be true in regard to the ounce, but this difference has not been perceptible in the different panthers which have come under our own observation; and even if there were some difference between the colour of the skin of the male and female panther, as observed by Pliny, it does not follow that such difference is universal, or that it can be considered as an invariable characteristic of the two animals. It must be admitted that darker and lighter shades in the skins of these animals have been frequently observed; but we believe that this difference results more from the age of the animal, and the peculiar nature of the climate, than from any distinction of the sexes.

The black leopard resembles the common one in all the habits of life. It lurks in ambush amongst bushes or verdure on the borders of the forest, and springs with a sudden and tremendous leap on such animals as pass by. So prompt, so rapid, and so well timed are his movements, that few escape. In vain may the wretched victim seek refuge in the trees; the leopard, notwithstanding the size and weight of his body, still pursues with an agility which seems almost incredible, and then despatched his victim. His thirst for blood is insatiable, and his ferocity is such, that even when subjugated, and in the power of man, he seems rather to be subdued than tamed.

The mode adopted to destroy the leopard is usually as follows: A bait, consisting of a piece of flesh, is suspended on a tree, in the immediate neighbourhood of which the hunter has previously erected a hut for his own concealment. The smell of the flesh attracts the animal to the spot, and whilst he is in the act of seizing it, the hunter shoots him with an aim so correct as almost always to wound him mortally. On the following day, and not before, he ventures to issue from his hiding place, and by means of a dog trained for the purpose, tracks the animal to his retreat. If he be still alive, the dog inevitably falls a sacrifice to his rage, and his cries give warning to the hunter to retreat from similar danger; but if he be dead, which most commonly is the case, the man seizes upon his prize unmolested.

In Asia the leopard is found in the mountains of Caucasus, from Persia to India, and also in China, where it is called *poupé*. The Buckharian traders, who often bring their skins to Russia, call them *bars*.

In regard to the black leopard, as an individual species, it may be generally said to differ from the common species only in its colour, and even when the dusky hair of the animal now under our consideration is turned aside, the hair beneath appears to have a tinge of the fulvous colour of the common leopard.

THE RATEL.

THE RATEL,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

It is to La Caille, in his voyage to the Cape, that we are indebted for the first clear description of the Ratel, which he designates as the *Blaireau puant;* and we are also indebted to Sparrman for much accurate information respecting this extraordinary animal.

In size the ratel nearly approaches the badger, and in form it has some remote resemblance to that animal. The whole of the upper surface of the body is remarkably broad and flat, comprehending also the top of the head and the neck; which, as well as the entire plane of the back, and the root of the tail, are of a dull ashen gray, rather white towards the head, and forming a singular contrast with the under parts, the muzzle, the contour of the eyes and of the ears, the limbs, and the remainder of the tail, which are throughout perfectly black.

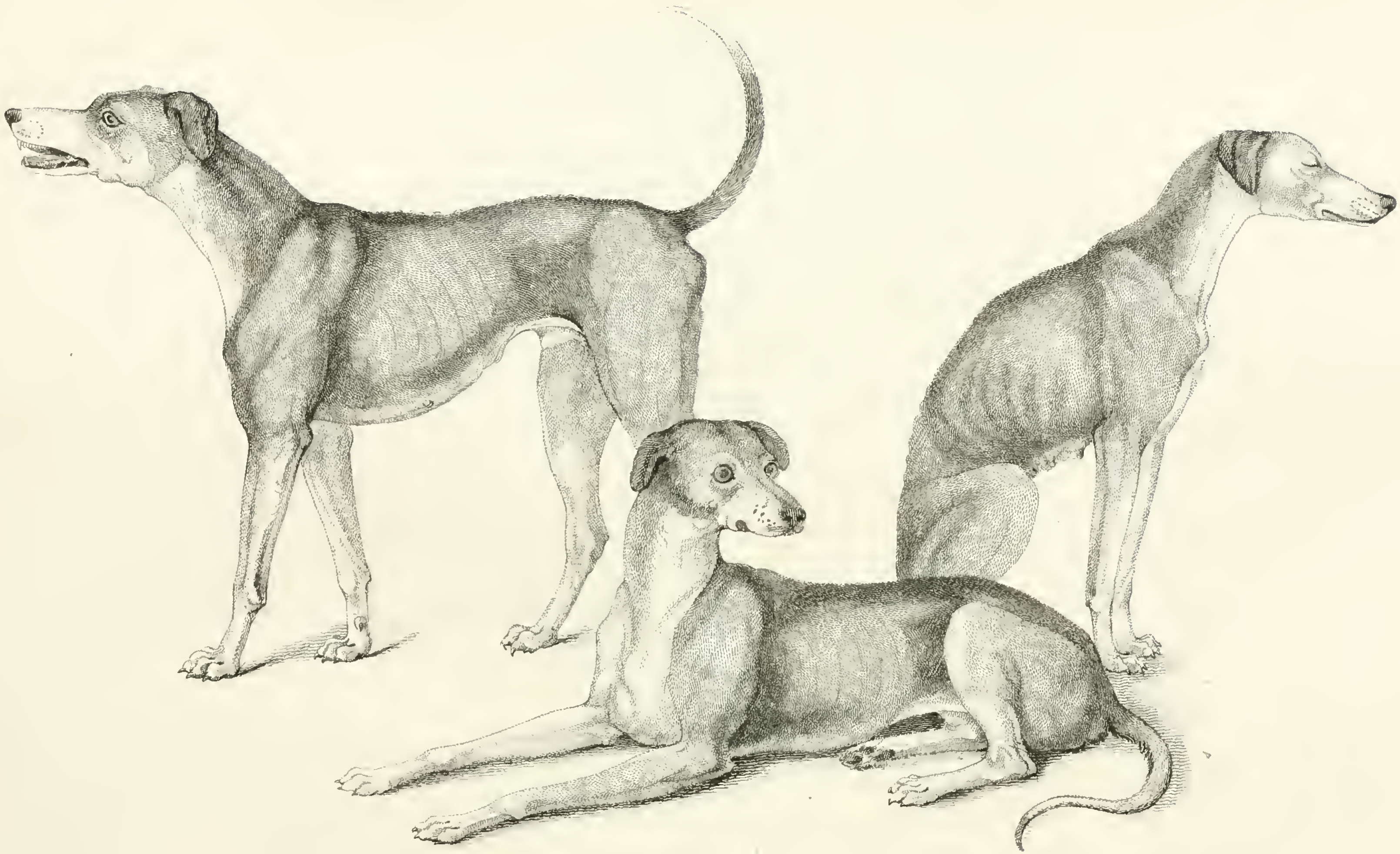
The hide of the ratel is so thick and tough, that there is scarcely any way of destroying him, but by beating him about the head, or plunging a knife into his body. The shortness of his legs will not permit him to make his escape by flight when pursued by hounds. The hair all over the body, although seemingly smooth, is remarkably stiff and wiry. The claws on the fore-feet are extremely long, and although not very strongly curved, are of considerable power, being formed for burrowing, an operation which, according to the testimony of all writers, is performed by this animal with uncommon dexterity. It has five toes upon each foot, each of the toes being surmounted by unretractile claws, which are slightly arched, and grooved along their under surface. Of these claws the middle three are much longer than the lateral, and the internal one is placed far behind the others. The total length of the animal is about three feet, of which its tail forms little more than a sixth. Its height does not exceed ten or twelve inches, and the length of its fore-claws, when not worn down by constant use, is about an inch and a half.

The ratel is formed by nature to be the adversary of bees, and the unwelcome visitor of their habitations. In regard to this singular habit of the animal, the authority of Sparrman has been generally received, although subsequent accounts, particularly those received from General Hardwicke, impart to it a character very much resembling the ferocious and disgusting one of the hyæna. Still, however, it must be borne in mind, that the ratel of India, and that of central Africa, are distinct species of the viverra genus, and in their habits bear little or no resemblance to each other. Sparrman thus describes the ratel of Africa in its pursuits after the mellifluous stores of the bees:—"Towards sunset he issues from his hole, and immediately commences the execution of his cunning plans, for the destruction of the hives. He places himself before his hole, sitting upright, and holding one of his paws before his eyes, in order to modify the rays of the sun, and at the same time to procure a distinct view of the object of his pursuit. Peering thus on each side of its paw opposite to the sun, he knows, when he sees any bees on the wing, that they are proceeding straight to their habitation; and, consequently, he takes care to keep in the same direction, in order to discover their retreat. Should it however happen that the bees, contrary to their usual custom, have established themselves in the hollow of some tree, at a considerable distance from the ground, the animal, unable to climb, finds himself foiled in his expectations, and in the first transports of his rage at his disappointment, he wreaks his vengeance upon the tree, by biting the trunk around, and these marks are certain indications to the Hottentots that a bees' nest is to be found there."

In this pursuit the ratel finds a very unerring guide and ally in the *Cuculus indicator*, or honey cuckoo, a little bird, which, it appears, possesses the sagacity to know that both men and beast are partial to the mellifluous stores of the bees. This little interesting bird, conscious of its own incapability to attack a hive by its own individual prowess, very politically takes advantage of the propensity inherent in others, and by a peculiar and alluring note, invites the ratel, or even the Hottentot himself, to follow it to the spot where the treasure is deposited. Its first aim is to secure the attention of the Hottentot or the animal, when it flies slowly on before them, stopping at times until the pursuer comes up with it; it then takes another flight, continuing its enticing note, until having arrived at the destined spot, it ceases to be heard, and perched on a tree in the vicinity, quietly waits for its share of the plunder, which is the usual reward of its valuable services.

On this subject a question naturally arises. Is it not probable that the Creator, who seems to have destined the ratel for the destruction of the bees, may have bestowed on it a hide so much tougher than that which he has given to other animals of the viverra genus, for the express purpose of defending it from the stings of the bees? For were the animal not provided with this means of defence, its destruction would be inevitable on the very first attack of an infuriated swarm. The toughness of his hide appears to be his greatest safeguard, for when a hound endeavours to bite him, it can only lay hold of the hide, which instantly separates from the ratel's body or flesh like a sack. Even when he is laid hold of by the hind part of the neck, and near his head, the animal can, as it were, turn round in its skin and bite its enemy. It is a remarkable circumstance, that such a number of hounds as would be able collectively to tear in pieces a lion of a moderate size, are sometimes obliged to leave the ratel dead only in appearance. Mr. Barrow states, "that such is the tenacity of life of the ratel, that it is a species of amusement for the farmer to run knives through different parts of the body, without being able for a length of time to deprive it of existence." On the other hand, Major Denham was informed by the natives of central Africa, where the animal is indigenous, that a single blow on the nose is sufficient to destroy it instantaneously; and in those regions, it is said to possess so great a degree of ferocity, as at certain seasons to venture singly to attack a man.

In regard to the variety mentioned by General Hardwicke, he says, that he found it in several parts of India, on the high banks bordering the Ganges and the Jumma, from which it rarely issues by day, but prowls at night around the habitations of the Mahommedan natives, scratching up the recently-buried bodies of the dead, unless the graves have been protected by thorny bushes, placed over them for the purpose. It burrows with such celerity, that it will work itself under cover in the hardest ground in the space of a few minutes. Its general food is flesh in any state, but birds and living rats appear to be peculiarly acceptable.



THE AFRICAN BLOODHOUNDS,

In the Royal Menagery, Tower of London.

Webb, del.

Pauwrine sculp.

THE AFRICAN BLOOD-HOUNDS,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

With the character of the blood-hound, the mind naturally associates something of a highly savage and ferocious nature, little inferior to that of the most sanguinary beasts of the Desert. Its acuteness of scent is so great, that instances are on record of a blood-hound following the track of an individual through a multitude of people, although every means was employed to throw an obstacle in its way. An instance of the above is related by the Hon. Robert Boyle, who says, that in order to make trial whether a young blood-hound was well instructed, a person of quality caused one of his servants to walk to a town four miles distant, and afterwards to a market town three miles further. The dog, without seeing the man he was to pursue, followed him by the scent to the above-mentioned places, and this notwithstanding a great multitude of market-people, who went along the same road, and of travellers, who had occasion to cross it. When the blood-hound came to the chief market-town, he passed through the streets without taking notice of any of the people there, nor did he cease his pursuit till he had reached the house where the man whom he sought was concealed.

Blood-hounds were formerly used in certain districts lying between England and Scotland, that were much infested by robbers and murderers, and a tax was laid on the inhabitants for keeping and maintaining a certain number of these animals; but as the arm of justice is now extended over every part of the country, and there are now no secret recesses where villainy can be concealed, the service of the blood-hound, in this respect, is become no longer necessary.

With our ancestors the blood-hound was an animal of great request, and as he was remarkable for the fineness of his scent, he was frequently employed in recovering game that had escaped wounded from the hunter. In barbarous and uncivilized times, when a thief or murderer had fled, this useful creature would trace him through the thicket and most secret covert, nor would he cease his pursuit till he had taken the felon. For this reason there was a law in Scotland, that whoever denied entrance to one of these dogs in pursuit of stolen goods should be deemed accessary to the theft.

The African blood-hounds, of which there are a leash in the Tower, appear to possess all the characteristics of the English dog, although in their form and make they are more slender, and have a more gauntlike appearance, with a surly and ferocious aspect. They were brought over to this country by that enterprising traveller Major Denham, from the interior of Africa, and presented by him to Mr. Cops of the Tower. It is to be regretted that so few particulars have been transmitted to us of the natural history of these animals; for the information given to Mr. Cops is confined to a very few points, and those even cannot be considered as furnishing any positive data on which a correct knowledge of their natural history can be founded. Major Denham admits that their qualifications in the chase, particularly in regard to cunning and sagacity, surpass any dogs with which he was ever acquainted. He has himself made use of them in the hunting of the gazelle, and was astonished at the cunning with which they followed the pursuit, frequently quitting the line of scent for the purpose of cutting off a double, and then recovering it with the greatest facility. Like the English blood-hound, it is not necessary that they should be placed immediately on the scent, for

after a lapse of several hours their sense is so acute that they will follow it with the greatest precision, and, on this account, they are frequently used in Africa for the purpose of tracing an enemy to his place of concealment.

A most extraordinary instance of this occurred in the New Forest, in 1810, on the authority of the late Right Hon. G. H. Rose. A person in getting over a stile into a field near the forest, remarked that there was blood upon it: immediately afterwards he recollected that some deer had been killed, and several sheep stolen in the neighbourhood, and that this might possibly be the blood of one that had been killed on the preceding night. The man went to the nearest lodge to give information, but the keeper being from home he was under the necessity of going to Rhinefield Lodge, which was at a considerable distance. Toomer, the under-keeper, went with him to the place, accompanied by a blood-hound. The dog, when brought to the spot, was laid on the scent, and after following for about a mile the tract which the depredator had taken, he came at last to a heap of furze fagots belonging to the family of a cottager. The woman of the house attempted to drive the dog away, but was prevented, and on the fagots being removed a hole was discovered in the ground, which contained the body of a sheep that had been recently killed, and also a considerable quantity of salted meat. The circumstance which renders this account the more remarkable is, that the dog was not brought to the scent until more than sixteen hours had elapsed after the man had carried away the sheep.

Mr. Bennett, speaking of these animals, says, "They are in fact, both for symmetry and action, perfect models; and there are few sportsmen who will not regret that there appears no chance of crossing our own pointers with this interesting breed: a mixed race, combining the qualifications of both, would unquestionably be one of the most valuable acquisitions to our sporting stock."

Their generic character differs very little from that of the common dog, having six cutting-teeth in the upper jaw, and those at the sides are longer than the intermediate ones, which are lobated. In the under jaw there are also six cutting-teeth, the lateral ones being also lobated. They have four canine teeth, one on each side, both above and below, with six or seven grinders.

Various attempts have been made to induce them to breed in this country, by associating with them native dogs of different species, but every attempt has hitherto proved abortive, nor have they evinced any disposition to perpetuate their own race in their present place of confinement.

They are of a dark sandy colour, with scarcely any intermixture of white, and considering their long confinement, a duration of rather more than three years, they appear in excellent health and condition. In disposition a great difference is manifest between the males and females, the latter being much more surly and ferocious than the former, testifying their dislike at the approach of a stranger by snarling and barking.

It is generally supposed that the blood-hounds which are found in the West India Islands, and particularly in the island of Cuba, were originally of the same breed as those which are now under our consideration, but being there acclimated, they breed in a state of domestication, and are used by the officers called *Chasseurs*, whose business it is to traverse the country with their blood-hounds, in pursuit of all persons guilty of murder or other crimes, and no activity on the part of the offenders can enable them to escape.

THE NYL-GHAUS.

THE NYL-GHAU,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The nyl-ghau is a very remarkable animal, uniting in some degree the characters of the antelope and the ox. Its height is about four feet to the top of the shoulder, and it measures nearly the same in length from the base of the neck to the commencement of the tail. The male is of a dark gray colour, and furnished with short blunt horns that bend a little forward. It has some white spots on the neck, as well as on the fore-legs, on each side behind, the shoulder joints, and on each fore-foot. Its ears are large, edged with white, and marked within with two black stripes. A slight black mane runs along the top of the neck, and which is continued to some distance down the back, and in the fore part of the throat there is a thick tuft of the same colour. The tail is moderately long and tufted at the end. The horns are short, pointed, smooth, and three-cornered at the base. The female resembles the male in general appearance, but is considerably smaller. The female, which is destitute of horns, is of a pale brown colour, with two white and three black bars on the fore part of each foot, immediately above the hoofs.

The first of the species that were brought to England were a male and female, sent from Bombay as a present to Lord Clive, in 1767. They bred every year, but their offspring were not reared. Two others were afterwards sent over, and were presented to the queen by Mr. Sullivan.

The manner in which these animals fight is very remarkable, and was particularly observed at Lord Clive's, where two males were put together in a small enclosure. While they were at a considerable distance from each other they prepared for the attack by falling down upon their fore knees, and when they came within a few yards they made a spring and darted against each other.

The nyl-ghau is seldom found wild in any of the parts of India within the British Settlements, and such of the animals as have been seen there have been brought from the distant interior parts of the country. Bernier makes mention of them in his travels from Delhi to the Province of Cachemire. He describes the emperor's amusement of hunting them, and says, that sometimes great numbers of them are killed. In several parts of the East they are considered as royal game, and are only hunted by the princes.

Although the nyl-ghau be reported to be an exceedingly vicious animal, yet one of them, that was in the possession of the late Dr. Hunter, was quite tame and docile. It was pleased with every kind of familiarity; always licked the hand which either stroked it or gave it bread, and never once attempted to use its horns offensively. It seemed to have much dependence on the organs of smell, and snuffed keenly and with considerable noise whenever any person came within sight. It did the same when food or drink was brought to it, and was so easily offended with an uncommon smell, or was so cautious, that it would not taste bread that was offered with a hand which had touched turpentine or spirits.

At the time that the two nyl-ghaus were in the stable, Dr. Hunter observed that whenever any one approached them with a hostile appearance, they immediately fell upon their fore-knees, and sometimes they would do so when he came before them, but as they never darted forward, he so little supposed this to be a hostile posture, that he rather considered it to be expressive of a timid or obsequious humility.

In regard to the genuflexion of the nyl-ghau it is directly the reverse of a hostile attitude, for we

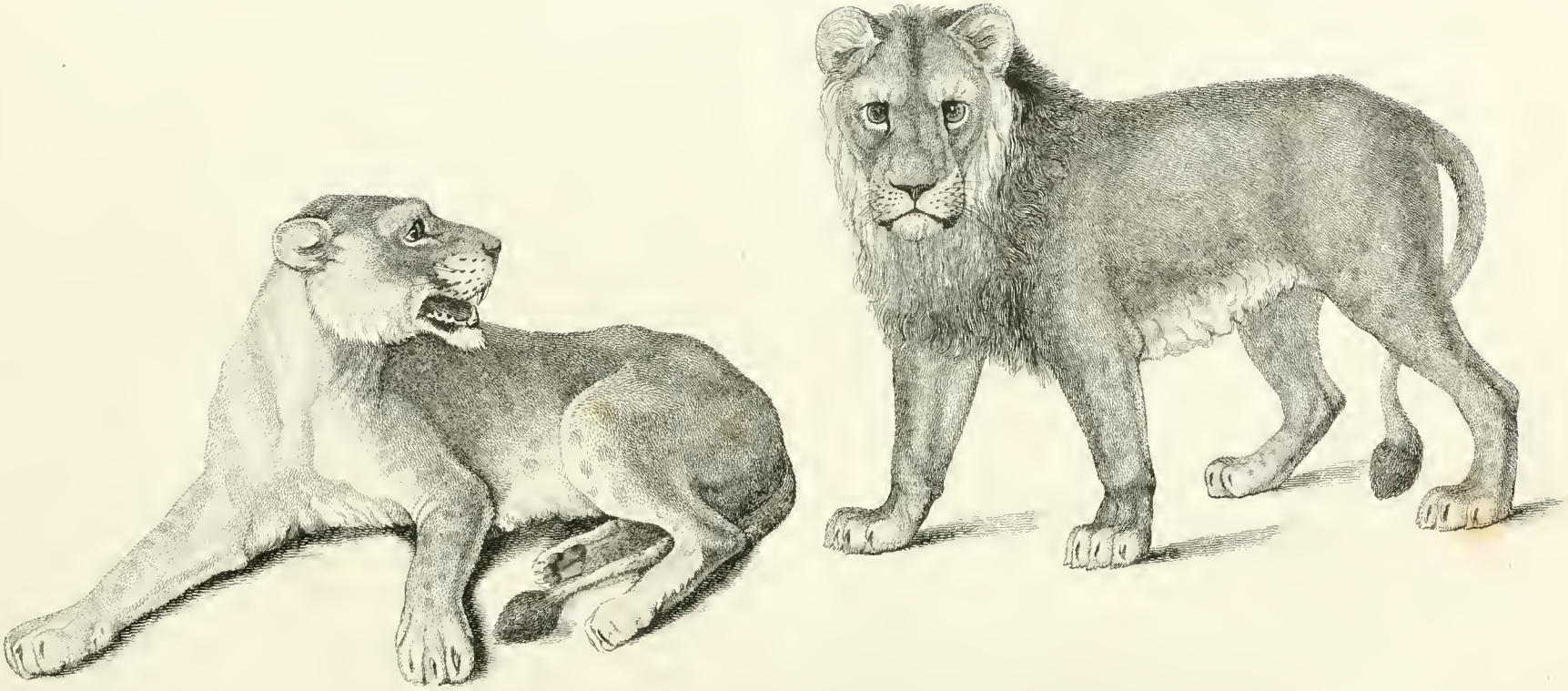
have ourselves witnessed the feeding of the animals which form the subject of the present sketch, and the pieces of oil cake on which they are fed are no sooner thrown on the ground, than the animals fall on their knees, and rise not until their provender be consumed. In their present state of captivity they appear completely tame and docile, and have no indication whatever of a vicious habit.

The force with which a nyl-ghau can dart against any object may be conceived from the following anecdote, that has been related of one of the finest of these animals that has ever been seen in England. "A labouring man, without knowing that the animal was near him, and therefore neither meaning to offend, nor suspecting that he was exposed to any danger, came to the outside of the poles of the enclosure in which it was confined. The nyl-ghau, with the swiftness of lightning, darted against the wood-work, and with such violence that he shattered it to pieces, and broke off one of its horns close to the roots. This violence, it is supposed, occasioned his death, for he died not long afterwards." From this it would appear, that at certain seasons the animal is vicious and fierce, however gentle it may be at other times.

In February, 1820, there was a nyl-ghau in the menagery at Exeter Change. It had been there six years, and was tolerably docile, but in its temper very capricious, and not to be depended on.

We find no mention of the flesh of the nyl-ghau constituting any part of the food of the natives of the country where it is indigenous; nor, as far as our researches extend, can we trace any particular use to which the animal has been applied. It appears merely an object of amusement as an animal fitted for the chase; and the historian of Aurengzebe mentions that that monarch forbade the destruction of the animal throughout his territories, reserving it to himself for the sole amusement of hunting.

Nyl ghau, in the Persian language, signifies a blue cow or bull.



THE WHITE OR SILVER LIONS,

In the Menagery of Mr. Cross, Royal Mews London

W. Panormo, del. et sculp.

THE WHITE OR SILVER LIONS,

IN MR. CROSS'S MENAGERY, ROYAL MEWS, CHARING-CROSS.

The lion is the noblest and most formidable animal of the cat tribe. In length it is from six to eight feet, and its tail, which is terminated by a tuft of black hair, is in itself about four feet long. The general colour of the body is a pale tawny, inclining to white beneath; but in the species now under our consideration, the colour is a silvery white, the mane partaking of a fulvous hue, and the tuft at the termination of the tail a jet black. The claws are retractile, not into sheaths but into the intervals between the toes, by means of a particular articulation of the last joint. The last bone but one by bending itself outward gives place to the last, which is only articulated to it, and to which the claw is fastened so as to bend itself upward and sideways more easily than downward; from which results, that the bone which is at the end of every toe being almost continually bent upward, the point which rests upon the ground is not the extremity of the toe, but the node of the articulation of the two last bones, and thus in walking the claws remain elevated and retracted between the toes, whose last joint bends only downward, because this toe does not naturally rest upon the ground, being considerably smaller than the others. The lioness is generally about three-fourths the size of the lion.

The animals now under our consideration are natives of Senegal, and are a most interesting species of the tribe. In grandeur and nobility they cannot be said to come up to the lion of central Africa, nor of Asia, and in some other of their exterior characteristics they bear a very faint resemblance. The mane of the silver lion is by no means so long or shaggy as that of the common lion; on the contrary, it is much shorter and more curly; nor does it surround the head with that profusion which imparts such a dignified appearance to the aspect of the other animal. There is also in its look a degree of greater mildness and placidity, although its tremendous strength impresses the beholder with no very pleasing sense of what his situation would be, were he to be exposed to the ungoverned and formidable power of the animal.

There seems to be no doubt that in those places where mankind have made the greatest advances towards civilization, the lion has lost much of his native boldness and ferocity. Experience seems to have taught him, that in cunning and resources he is inferior to man; and he therefore seldom attacks the human race unless forced to it by the imperious calls of hunger. The lion has often been brought from his native forests into Europe, and he generally appears the principal character in all the metropolitan and itinerant menageries. When taken young, he is capable of being made very gentle and tractable, and when brought up among domestic animals, he is easily accustomed to live and even to sport occasionally with them. He is gentle and caressing to his master, and if he sometimes resumes his natural ferocity, he seldom turns his rage against his benefactors. When led into captivity he discovers symptoms of uneasiness without anger or peevishness; and in time he assumes the habits of gentleness, obeys his master, and sometimes spares the animals that are thrown to him for prey. He has been known to live peaceably with them; to afford them part of his food, and even to want food himself, rather than deprive them of that life which he generously had once spared. An instance of this might be adduced in the story of the dog who was put into the cage of a lion in the menagery at the Tower some years ago for food; the stately animal, however, spared his life, and they lived together for a considerable time in the same den, in the most perfect harmony, and appeared to entertain a great affection for each other. The dog had sometimes the impudence to

growl at the lion, and even to dispute with him the food which was thrown to them; but the noble animal was never known to chastise the impertinent conduct of his little companion, but usually suffered him to eat quietly till he was satisfied, before he began his own repast.

It is in the interior of Africa that the lion exerts his greatest ravages, and reigns superior among the weaker quadrupeds. His habitation is in the thickest parts of the forest, and he is seldom seen by day, but, when night approaches, he quits his retreat, and prowls about till morning. The roaring of the animal when in quest of prey is generally said to resemble the sound of thunder, and being re-echoed by the rocks and mountains appals the whole race of animals. Frequently, however, he varies his voice into a sort of scream or yell. His strength is so great, that he has been seen to carry off, with apparent ease, a middle-sized ox, or even a buffalo. He usually knocks down his prey with his paw, and seldom bites it till he has given it the mortal blow. His teeth are so strong that he breaks the largest bones with ease, and swallows them with the flesh. He usually conceals himself in a thicket, from which he darts upon his prey, and if he chance to miss his aim, he will not follow, but turns back to the place from which he sprung on it, slowly, and step by step, as it were, measuring the distance between the two points, as if to find out how much too short, or how much beyond the mark he had taken his leap. The quality of his courage, though natural, is exalted or depressed according to the success with which he habitually employs his force. Accustomed to measure his strength by that of other animals which he encounters, the habit of conquest renders him haughty and intrepid. Wounds irritate, but do not terrify him; neither is he dismayed at the sight of numbers. A single lion of the desert has been known to attack a whole caravan, and if, after a violent and obstinate engagement, he finds himself weakened, he retreats fighting, and always keeping his face to the enemy

The lion is commonly said to devour as much at once as will serve him two or three days, and in confinement he is usually allowed about four pounds' weight of raw flesh for his daily subsistence. His tongue is furnished with reversed prickles, so large and strong as to be capable of lacerating the skin. When he is enraged, or in want of food, he erects and shakes his mane, and beats his tail with considerable violence against his back and sides. In this state, the inhabitants of the Cape assert that it is certain death to any person who happens unfortunately to approach him; but when his mane and tail are at rest, and the animal is in a placid humour, travellers may, in general, pass near him with safety.

The lion is frequently hunted at the Cape of Good Hope for the sake of his skin and flesh; the latter is esteemed by some as excellent food, and is often eaten by the Negroes. The colonists of the Cape hunt him with dogs; and it is reported that twelve or sixteen are sufficient to overcome one lion. As the lion is less swift than the dogs, the latter easily approach him; when, from a greatness of soul and a degree of sullen magnanimity, the lion turns round, and waits for the attack, shaking his mane, and roaring with a short and sharp tone, or sits down to face them. The hounds then surround him, and rushing upon him all at once, are thus, by their united efforts, able to subdue or tear him in pieces.

The lion is said to prefer the flesh of a Hottentot to that of any other animal, and next to the flesh of the Hottentot, that of horses and buffaloes; but on sheep he seldom deigns to fix his paw.

THE TORTOISE SHELL HYÆNA, OR HYÆNA DOG.

In the Royal Menagery Tower of London.

W Berthoud del.

W Panormo sculp

THE TORTOISE-SHELL HYÆNA, OR HYÆNA DOG,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

Although this animal is, in its form and make and general outward appearance, wholly dissimilar to the spotted and striped hyænas, described in a former part of this work, yet in its natural characteristics it bears the strongest resemblance. It possesses the same ferocity, the same untameable disposition, and in its general habits it is equally brutal and disgusting. It is very seldom that a specimen of this species is to be seen in this country, as from an uncommon degree of cunning, which is one of its distinguishing traits of character, it seldom allows itself to be trepanned, nor is it in its nature so prolific as the striped or spotted hyæna. In its make it is much longer than the common hyæna, resembling more the form of a wolf, and in the shape of its head it also bears some resemblance to the latter animal. Its ears are rounded at the extremity, and erect, and the eyes have all the wildness and ferocity natural to the species. Its colour is a light fulvous-brown, intermixed with large irregular-shaped patches of a darker hue, resembling the shades of the tortoise-shell, from which circumstance it derives its name. The colour of the nose and muzzle is completely black, and a strong line of the same colour passes from the nose along the centre of the forehead to between the ears. The tail is of moderate length, covered with long bushy hair, and divided in the middle by a ring of black, the remaining part being nearly white. There is a peculiarity attached to the colouring of this animal, which is, that it varies in different individuals in the same manner as the tortoise-shell spots of the cat; no two individuals resemble each other in the size and configuration of the spots, although in disposition and appearance no difference is perceptible. In its generic character it differs very little from the striped hyæna, but its light and agile make indicates that it is more adapted for pursuit than for the slow and prowling habits of the common species. There is something in the aspect of this animal that indicates a peculiar gloominess and malignity of disposition, and its manners correspond with its appearance. An attempt was made to associate this animal with the other hyænas in the same menagery, but a war broke out immediately, which would have terminated in the death of one of the combatants.

In the shape and elevation of its body, the hyæna dog is decidedly distinguished from the common species, its legs being considerably longer and straighter in relation to its size, and the general form and proportions, in regard to the structure of the whole frame, exhibit not the slightest similarity. It is entirely destitute of the erect and bristly mane of the hyæna, nor does it carry its head in that crouching, depressed attitude, which distinguishes the other species of the same genus. In some respects, this animal may be said to form a link between the hyæna and the dog; it corresponds completely with the latter in the number of its teeth, and also in the structure of the skeleton, particularly in the vertebræ of the neck. The skeleton of the hyæna dog, when put in apposition with that of the hyæna, presents a very slight affinity.

The hyæna dog is a native of the south of Africa, and on the frontier settlements of the Cape commits great havoc and devastation. We are informed by Mr. Burchell, that it hunts in regular packs, preferring the night, but frequently pursuing its prey even by day. It is not only exceedingly fierce, but also remarkably swift and active, in which latter qualities it is so superior, that none but the fleetest animals can escape from its pursuit. Sheep, horses, and oxen, appear to be its favourite game; on the former it makes its onset openly and without fear, but it seems to stand in awe of the latter,

and attacks them only by stealth, frequently surprising them in their sleep, and biting off the tails of the oxen, for which it appears to have a particular fancy, and inflicting such serious injuries upon the horses, especially the young colts, that they rarely survive the attack of the animal.

The hyæna dog may be said to be domesticated throughout the whole of the interior of Africa. We were informed by Mr. Larnders, the companion of the unfortunate Clapperton, in his attempt to discover the source of the Niger, that throughout the whole of their journey the Hyæna was sure to prove a continual source of dread and annoyance to them. Their continual howling during the night, sounding from every quarter around them, and proceeding almost from a hundred mouths at a time, was sufficient to strike terror into the stoutest hearts. It was only by means of large fires, kept continually blazing round their bivouac, that these ferocious brutes could be kept in any kind of awe, and even at times their natural ferocity and boldness appeared to stimulate them to rush past the fires, and glut themselves with the blood of their victims. They have been seen prowling in groupes round and round the protecting fires, shewing their grinning, snarling, hideous faces, and scratching the ground with their fore-paws, in the wildest ebullitions of rage at the flaming barrier which stood between them and their prey. The habitations of the natives are at night strongly barricadoed against the encroachments of these animals, who, as soon as night sets in, commence their predatory excursions, and appear to think themselves privileged to prowl at random through the towns, gorging themselves with the offals and the refuse which the lazy and dirty habits of the natives incline them to leave in the streets. It is on account of the depredations of these animals that the inhabitants, in all cases where the opportunity presents itself, select an island for the burying-place of their dead, for there only are they secure from the rapacity of the hyænas ; and in those situations where an island cannot be found, the natives prefer attaching the corpse to the highest branches of a tree, rather than inhuming it in the earth, although the remedy is as bad as the disease, for the body, thus exposed, soon becomes devoured by the birds of prey. In some parts, rather than allow the corpse to be torn to pieces by the hyæna, it is thrown into the river, where it is soon eaten by the alligator, but as that creature is, in many parts of Africa, a fetish, it is not by any means considered a misfortune to be devoured by it.

Mr. Bruce, speaking of this race of animals, says, " These creatures were a general scourge to Abyssinia: in every situation, both of the city and the field, and they seemed to surpass even the sheep in number. From evening to the dawn of day, the town of Gondar was full of them. Here they sought the different pieces of slaughtered carcasses, which this cruel and unclean people were accustomed to expose in the streets without burial. Many a time in the night, when the king had kept me late in the palace, on going across the square from the king's house, I have been apprehensive lest they should bite me in the leg. They grunted in great numbers around me, although I was surrounded by several armed men, who seldom passed a night without wounding or slaughtering some of them. One night in Maitsha, being very intent on an observation, I heard something pass behind me towards the bed, but on looking round could perceive nothing. Having finished what I was then about, I went out of my tent, resolving directly to return ; this I immediately did, and in so doing perceived two large blue eyes glaring at me in the dark. I called my servant to bring a light, and we found a hyæna standing near the head of the bed, with two or three large bunches of candles in his mouth. To have fired at him would have been at the risk of breaking my quadrant or other furniture, and he seemed, by keeping the candles steadily in his mouth, to wish at that time for no other prey. As his mouth was full, and he had no claws to tear with, I was not afraid of him, and with a pike struck him as near the heart as I could. It was not until I had done this that he shewed any signs of fierceness, but upon feeling his wound he dropped the candles, and endeavoured to run up the shaft of the spear to arrive at me, so that I was obliged to draw a pistol from my girdle and shoot him, and nearly at the same time my servant cleft his skull with a battle-axe."

THE URSINE SLOTH, OR SLOTH BEAR.

W. Bertrand d. W. Panorm. sculp.t

In the Gardens of the Zoological Society

THE URSINE SLOTH, OR SLOTH BEAR,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The whole tribe of sloths are unparalleled in the rest of the animal creation for slowness and inactivity. Only three species have hitherto been discovered, two of which are natives of South America and the third of India. The latter is the ursine sloth, and has been but lately introduced to the knowledge of European naturalists. The animal has at first sight so much of the general aspect of the bear, that it has actually been considered as such by some observers, but it is no otherwise related to the bear than by its size and habit, or mere exterior outline. It is not so large as the bear, and is covered all over, except on the face, or rather the snout, which is bare and whitish, with long, shaggy, black hair, which on the neck and back is much longer than on any other parts. On the fore-part of the body the hair points forwards; on the hinder-part backwards. The eyes are very small: the nose, or snout, is somewhat of an elongated form, totally destitute of hair; it also appears as if furnished with a sort of transverse joint, or internal cartilage, which in this part admits of a peculiar kind of motion. The ears are rather small, and partly hidden in the long hair of the head.

The animals belonging to this order have no front teeth in either jaw. The ursine sloth has two canine teeth, of a moderate size, which, unlike the canine teeth of other animals, are obtuse. In the two-toed and the three-toed sloth, there are five grinders on each side.

The general attitude of this animal is strongly characteristic of its name. It appears to sleep away the greater part of its time, rolled up like a great black ball in one corner of its den, and is only roused by the calls of hunger or the authoritative mandate of the keeper. In the latter case it is frequently a task of difficulty to rouse the sluggard, or to keep him for any length of time in an active state. He returns instantly to his corner, rolls himself up, by putting his snout between his fore-legs, and there remains almost a lifeless lump, until the voice of the keeper again awakens him.

In the formation of his feet he very much resembles the common bear, particularly in the structure of the claws, by means of which he is enabled to climb trees in search of prey, or to escape the pursuit of its enemies.

The colour of the animal is a complete black, with the exception of a whitish streak on each side of the under jaw, and terminating near the chest, as represented in the engraving. It is, however, very seldom that the animal can be brought into such an attitude as to display to the spectator this variation of colour, for when pacing its den, it carries its snout generally close to the ground, like the hog, as if in search of food.

Of the other species of this tribe, some most singular accounts have been published, particularly by Kircher, who rests his authority on the report of a Provincial of the Jesuits, who had been resident in South America, and who, having at different times had several of these animals in his possession, had tried several experiments with them relative to their nature and properties. The figure of the three-toed sloth is, he says, most extraordinary. The animal is about the size of a cat, has a very ugly countenance, and has its claws extended like fingers. It lives generally on the tops of trees, and if these are at all lofty it sometimes occupies two whole days in crawling up and as many in getting down again. Providence has doubly guarded it against its enemies: first, by giving it such strength in its feet that whatever it seizes it holds with astonishing tenacity: secondly, in having given it such an affecting countenance, that when it looks at any one who might be tempted to do it an injury, it is almost

impossible not to be moved with compassion: it also sheds tears, and upon the whole persuades one that a creature so defenceless and so abject ought not to be tormented.

To try an experiment with this animal, the Provincial had one of them brought to the Jesuits' College at Carthagena. He put a long pole under its feet, which it seized very firmly, and would not relinquish its hold. The animal therefore thus voluntarily suspended was placed between two beams, where it remained without food for forty days, the eyes being always fixed on those who looked at it, who were so affected that they could not forbear pitying its dejected state. At length being taken down, a dog was let loose on it, which after a while the sloth seized in its paws, and held it till it died of hunger. In ascending a tree this animal, first carelessly, stretches out one of its fore paws, and fixes its claws in the bark of the tree, as high as it can reach, then heavily raises its body, and gradually fixes its other paw, thus ascending with the greatest apparent difficulty. When he has reached the top of the tree, he continues there till he has despoiled it of every thing that can serve him for food, and then to save himself the trouble of a tedious and difficult descent, it is said that he suffers himself to drop from the tree upon the ground, being secured from any injury in the fall by his very tough and hairy skin. Here he remains till the imperious calls of hunger again incite him to the arduous task of climbing another tree.

These animals are always the most active during the night, at which time they utter their plaintive cry, ascending and descending in perfect tune through the hexachord, or six successive musical intervals. When the Spaniards first arrived in America, and heard this unusual noise, they fancied they were near some nation, the people of which had been instructed in European music.

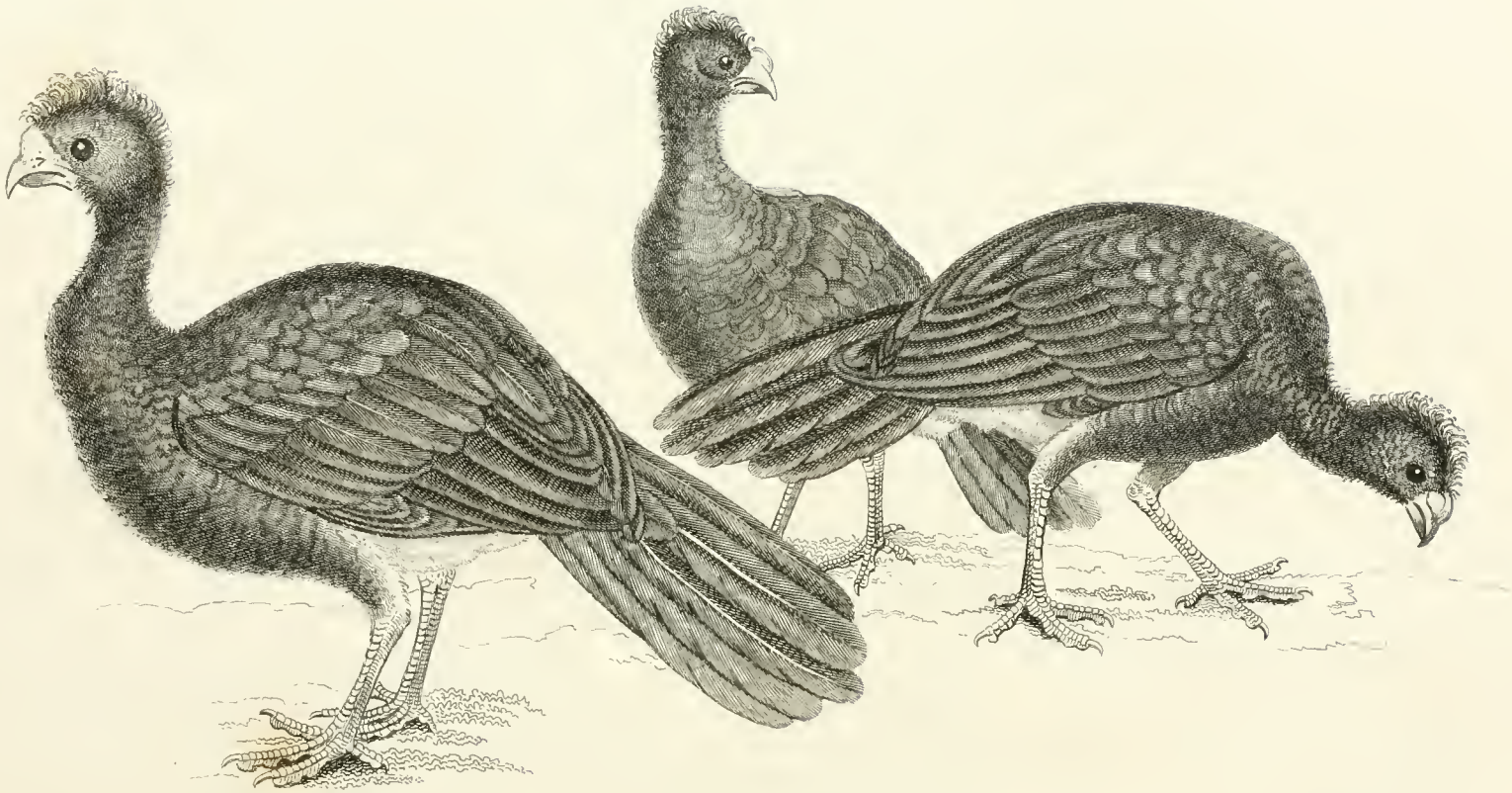
A sloth that was taken by some person who went out in the expedition under Woodes Rogers, was brought on board the ship, and put down at the lower part of the mizen-shrouds. It climbed to the mast-head, but occupied two hours in what a monkey would have performed in less than half a minute. It proceeded with a slow and deliberate pace, as if all its movements had been directed by machinery.

The two-toed sloth, although heavy and excessively awkward in its motions, has sufficient activity to ascend into and descend from the loftiest trees several times in the course of a day. Like the last species, he is chiefly alert in the evenings and during the night.

The Marquess de Montmirail, some years ago, purchased one of these animals at Amsterdam. It had been fed with sea-biscuit, but he was told that as soon as the winter was over, and the verdure began to appear, it would require nothing but leaves. These he ate freely while they were green and tender, but the moment they began to be dry and shrivelled, or worm-eaten, he refused them. During the three years that the Marquess had him, his common food was bread, apples, roots, and milk; but he was so heavy and inanimate, that he did not even recognize the hand that fed him.

In its general appearance, as well as in size, it bears a considerable resemblance to the Tridactylus; it is, however, somewhat more slender in its shape, covered with smoother or less coarse and harsh hair, and, like that species, is of a uniform colour.

Of the habits of the ursine sloth, in its savage state, few particulars have been obtained; it is not numerous even in the country where it is indigenous, and its skin is the only object for which it is sought after.



Panormo del.t

THE CURASSOWS.

Simpkin sc.

In the Royal Menagerie Tower of London

London, Published by Thomas Kelly, Paternoster Row, Jan.y 1, 1830

THE CRESTED CURASSOW,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

Considering the great facility with which these birds could be introduced into this country, and the valuable acquisition which they would make to our farm-yards, by furnishing them with a new breed of poultry, possessing all the advantages and merits, and in some respects in a higher degree, of our domestic gallinaceous fowls, it is a matter of surprise that so little attention has been paid to the acclimation of the curassow in this country. They possess all the necessary qualifications for their introduction amongst our gallinaceous fowls, being quite familiar in their habits, and appearing to accustom themselves to a state of comparative confinement with the greatest facility, and without any apparent diminution of their health or cheerfulness. The turkey itself, of which the curassow is a species, was not introduced into England until the reign of Henry VIII., and was as wild in the woods of North America, as the curassow is at present in those of the Southern Continent. It must not, however, be concealed, that the turkey is with us a degenerated bird; for Josselyn says, that in the wilds of America he has eaten part of a turkey-cock which, after it was plucked, and the entrails were taken out, weighed thirty pounds; and Lawson, whose authority is unquestionable, saw half a turkey serve eight hungry men for two meals, and says, that he had seen others which he believed would each weigh forty pounds, and some writers assert that instances have occurred of turkeys weighing sixty pounds. We have alluded to the acclimation of the common turkey, from some fears which we have heard expressed that the climate of this country would not be congenial to the breeding and rearing of the curassow, and that if the turkey has degenerated, coming from a more northern latitude, it could not be rationally expected that the breed of the curassow could for any length of time be maintained in this country, and that it would ultimately so dwindle away, as not to make the rearing of it an object worthy the attention of the private breeder or the farmer. It should, however, be taken into consideration, that the curassow, according to M. Temminck, was once thoroughly acclimated in Holland, where, in a state of domestication, it was as prolific as any others of the gallinaceous tribe. It is much to be regretted, that the establishment at which these birds were bred was broken up by one of those commotions attendant on the French Revolution, and consequently the whole labour was lost, which had been expended in reducing them to a state of domestication. We believe it to be the intention of the Zoological Society to attempt the acclimation of this bird, and to introduce it as one of the members of our farm-yards; an event which will be desirable, not only on account of the size and beauty of the bird, but also on account of the delicacy and excellence of the flesh, which, by those who have partaken of it, is said to surpass that of the pheasant or the common turkey.

The plumage of the crested curassow is of a deep black, with a slight greenish hue on the head, crest, wings, back, and upper part of the tail. It is however remarkable, that this greenish hue presents itself to the eye only when the bird is viewed from a particular position; for if that position be changed to the opposite direction, the same parts appear to be a uniform black, and other parts which had the black appearance assume the greenish hue. This singularity is, however, by no means peculiar to the curassow, for it is common with all birds whose colour is black, as in the raven and the

crow, and is therefore to be explained by the principles and properties of light, and not by the actual nature of the plumage. The crest is in length from two to three inches, and may be said to occupy the whole upper surface of the head: it has a curled and velvety appearance, and is capable of being raised or depressed at pleasure, according as the bird is under the excitement of anger or any other violent affection. There is one habit which distinguishes this bird particularly from the turkey, to which it may be said to approximate in some of its characteristics closer than to any other bird, namely, the formation of its nest. The turkey, like the majority of gallinaceous birds, pays little or no attention to the structure of its nest, laying its eggs indiscriminately in any place, without any previous preparation; the curassow, on the contrary, builds its nest on the very tallest trees of the forest, and this very circumstance presents a great impediment to the domestication of the bird, as it cannot submit to the process of incubation on the bare ground, or in an artificial coop. The curassow may be classed in the perching order of birds; indeed, the very structure of its hinder toe, which is very long, and far more robust than that of the common fowl, declares at once the native habit of the bird.

The bill of the curassow is of moderate length, and of considerable thickness; the upper mandible is curved and vaulted from the base to the point, and is sometimes surmounted by a protuberance like that of the common turkey. The wings are short, but the tail is rather long, consisting of twelve broad pens. The head is ornamented with a closely tufted crest, composed of long curled feathers, and the legs are about the same size and thickness as those of the common turkey. It must, however, be considered that the majority of these characters are common to the genera Pauxi and Penelope; but nevertheless, there are certain grounds of distinction between those genera and the curassows; and these are chiefly founded on the bill and the shape of the nostrils, the nakedness of the throat, and the position of the hinder toe.

The curassow is a gregarious bird, and in a wild state associates in flocks, consisting sometimes of more than five hundred. In Mexico, Guiana, and Brazil, and, in fact, over a large portion of the southern continent of America, they frequent the great swamps, leaving them at sunrise to repair to the dry woods in search of food. According to Sonnini, the curassow is so extremely common in the woods of Guiana, that he regards it as the most certain resource of the hungry traveller, whose stock of provisions is exhausted, and who has consequently to trust to his own gun for furnishing him with a fresh supply. In their native haunts they appear to be under no fear or uneasiness from the intrusion of man; and even when a number of them have been shot, the remainder sit quietly perched on the trees, apparently unconscious of the danger that surrounds them. In proportion, however, as their haunts become contiguous to places inhabited by man, they become wilder, and assume all the characteristics of other birds, which, to avoid the pursuit of the hunters, exhibit the utmost mistrust and fear whenever a human step approaches. They lay but once a year, during the rainy season, and in their prolificness cannot be compared to the gallinaceous fowls of this country, as they seldom produce more than from five to eight eggs, which are nearly as large as those of a turkey, but not speckled, being quite white, like those of the common barn-door fowl. They appear to take some trouble in the formation of their nests, constructing them externally of branches interlaced with the stalks of herbaceous plants, and lining them internally with leaves. They generally select the highest branches, ascending to them from bough to bough, never reaching their nests by the power of their wings: they run swiftly, but fly awkwardly; and about the month of May they are so exceedingly fat, that they are easily overtaken by the hunter.

The curassow has not been long enough domesticated in this country to enable us to obtain a correct knowledge of all its habits, and few travellers have transmitted to us any particular account respecting it: little doubt, however, exists that, in course of time, this bird will be considered as a member of the gallinaceous family, and rival the turkey or the pheasant at the tables of the great.

THE CARACAL OR LYNX.

In the Gardens of the Zoological Society

W. [illegible] del. et sculp.

THE CARACAL, OR LYNX,

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

This animal, now known by the name of the Caracal, is indisputably the same as the lynx of the ancients, and the change of its name may be attributed to that spirit of reformation which has been latterly displayed in the improvement of our scientific nomenclatures. The Romans gave the name of *Lupus cervarius* to this animal, from an idea that it was a spurious intermixture of the wolf and the hind. The word *Lynx* is a derivation of the Greek word *lugx,* from which is also derived the German *luchs.* The ancients attributed to this animal the most surprising qualities, one of which was, that the acuteness of its vision was so great, that it could see through "a stone wall:" but on this head Gesner says, "I cannot tell whether the sight be attributed to the lynxe truely accordinge to nature, or fabulously in imitation of the poeticall fiction of Lynceus, of whome it was saide in ancient time that hee sawe through stone walles."—It is however sufficient for us to know that there is no animal existing which, from its wonderful powers of sight, is able to discover its prey at so great a distance as the lynx.

In size the caracal is rather larger than the fox, being about four feet in length, exclusive of the tail, which measures about six inches. The ears, which are long and upright, taper gradually to a fine tip, surmounted by a long pencil of black hairs. The fur is long and thick, and on the upper surface of the body, is of a deep and uniform brown, obscurely marked with small dusky spots. The under and inner parts are nearly white; the chin and lower lip are completely white, as well as two spots, one on the inner side of and above the eye, and the other beneath its outer angle. The tail is between eight and nine inches long, and is of the same colour as the body from the base to the tip. The whiskers, unlike others of the cat tribe, are very short, and rise not from distinct spots, as in the lion or leopard, but from a series of lines which run parallel on each side of the muzzle. At a small distance from these lines, and in front of the neck on each side, is a short and thick tuft of lighter coloured hairs.

The lynx is able to pursue his prey even into the branches of the highest trees. Neither the wild cat, the martin, the ermine, nor even the squirrel can escape him. He also unrelentingly seizes upon and destroys the stag, the roebuck, and the hare. When sheep happen to be folded in the neighbourhood of his retreat, he will scratch his way through the earth under the doors of the fold, and if not checked by the presence of the shepherd, will commit the most horrible devastations.

Topsell, speaking of the lynx, says, "In summer time they are very weak, and live amongst the rocks, never straying far from their own lodging, and hurting no man until the autumn. They hunt wild goats, which they follow from rock to rock, leaping as fast or faster than the goats themselves. They hunt also wild cats and hares, and some other little beasts, but the greatest lynxes hunt harts and asses. It is their custom to get up into trees, and there to lie in wait for their prey, until they espy it under the boughs, and then suddenly leap on the back of it, in which they fix their claws so fast that no violence can shake them off, but with the sharpness of their teeth they bite into the skull and eat out the brains, to the utter destruction of the man or beast; but if the beast be small, they devour the entire body." Gesner says, "There be a wonderfull secret in their nature, that although they be long afflicted with hunger, yet when they eate their meate, if they heare any noise, or any other chaunce cause them to turne about from their meat, out of the sight of it, they forgette their

prey, notwithstanding theyr hunger, and goe to seeke another booty, neuer remembering that which they had before them, nor yet returne backe againe to eate thereof."

The lynx is at present confined to the warmer climates of the Old World, throughout the whole of Africa, from Egypt and Barbary to the extremity of Caffraria, and in the southern half of Asia, at least as far eastward as the Ganges; he is generally to be found in the track of the larger and more formidable quadrupeds. It is, however, certain, that the lynx was formerly a native of the greater part of Europe. Bonarus mentions having seen them hunted in Muscovy, Lithuania, Poland, Hungary, and Germany. Gesner says, "There are lynxes in divers countries, as in Russia, Germany, Hungary, and even so far northe as Scotland; so also they are most abundant in Scandunavia, in Swesia; so also about Hyelsus and Helsyngia; likewise in all the Regions upon the Alpes, and in *Sylva Martia;* they are also very plentifule in Aethiopia, in France, and Italy, about the River Padus, and in the Island Carpathus. They are sometimes taken in Germany, in the Dutchy of Wertenberg, and that it was once credibly affirmed one of them leaped downe from a tree uppon a countreyman as he passed under the same tree, but being weary, and having an axe on his necke, he received her on the sharp edge thereof, and so killed her, otherwise she woulde soone haue killed him."

From the circumstance of the lynx being always found in the track of the lion, it was, for a length of time, the prevailing opinion, that, like the jackal, he was one of the purveyors of the lion, being able, by his delicate sense of smell and piercing vision, more easily to direct him to his prey. This opinion, however, has been refuted by late travellers, who affirm, that the motive of the lynx in following the track of the ion, is no other than to satiate himself with the mangled carcasses which the lion may have left. A singular anecdote is recorded by Olaus Magnus, in regard to the fondness of a lynx for the note of the woodpecker. He says, "he was once standing before a cage in which was confined a lynx, in the City of Lyons, with the intent of taking a drawing of the animal; such, however, was the restless disposition of the brute, that he could not retain him a single minute in the same attitude. On a sudden, a countryman came to the spot, having a woodpecker in his basket, and the bird no sooner began to chirp than the animal stood still, and as long as the woodpecker chirped, he remained in the same attitude; but when the man retired with the bird, the animal resumed his restless motion, and in order to finish the portrait, he despatched a messenger after the owner of the bird, and purchased it of him; as soon as the animal heard the bird, he stood very still until the business was despatched, and the work absolutely perfected."

The native ferocity of the lynx is so great, that it is impossible either to tame or to subdue him. In a state of captivity, on the slightest irritation or insult, he expresses his malignity by a kind of snarling scream; and it is to this very noise that we are inclined to attribute the name of caracal, which has been given to the animal. On this head, the very scientific author of the "Tower Menagery" says, "that it is to the striking character afforded by its organs, that the animal is indebted for his modern name of CARACAL; corrupted from his Turkish appellation, which equally with that by which he is known in Persia, signifies 'black ear.'" We are, however, inclined to consider the word caracal as a corruption of the Latin word *corcare*, to croak or whine. Thus Solinus, the author of Philomela, says, *dum linxes corcando fræmunt, ursus ferus uncat*, (while the lynx croaketh, the wild bear whineth,) and Arlunus says, *corcare vox lupæ ceruarij* (to croak is the voice of a lynx.)

The animal from which our engraving is taken, is a native of India, from the Nepaul territory; and from the rarity of an Asiatic caracal being brought to this country, a question has arisen, whether the caracal of India, and the lynx of Africa, be the same species. As no immediate opportunity presents itself in this country for comparing the two animals, the subject must be left open to future discussion.

THE CROWNED CRANES

THE CROWNED CRANES,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

These beautiful birds form a part of the fourth order of birds, the waders or *grallæ* of Linnæus, and are strikingly characterized by the great length of their legs, the lower part of which is entirely bare of feathers; a peculiarity which is of essential service to them, by giving them the power of standing for a considerable length of time in the water without committing any injury to their plumage, during which period they are on the watch for fish and reptiles, on which they chiefly subsist.

The characters of this tribe are, a long, strong, and sharp-pointed bill; linear nostrils, and pointed tongue; toes connected by a membrane as far as the first joint, and the middle claw, in some of the species, pectinated. The head of the crowned crane is ornamented with a crest of long and slender filamentous feathers, capable of being raised or depressed at pleasure; its wings are large and powerful, and its legs are covered with large scales; the outer and middle toes are united at the base, and the claws are short, and destitute of denticulations.

The crowned crane, amongst all the species of its tribe, is remarkable for the grace and variety of its attitudes, and the elegance and lightness of its proportions. The feathers which cover its forehead are of a brilliant black, ending in a short and thick tuft of a velvety appearance; the filaments of its crest are of a yellowish hue, and terminate in pencils approaching to a jet black; its bill and legs are also black. The feathers which are long and slender, and which fall down its neck, are black, with a slight tinge of lead colour; and the broader feathers, which cover the upper and under surface of the body, are of the same colour. The wing-coverts are white; the primary wing-feathers are black, and the secondary ones of a reddish-brown.

In its disposition the crowned crane is extremely tame, and no difficulty whatever exists in its domestication. In its present state of comparative confinement, it exhibits no symptoms of fear, but walks about the court-yard with the same confidence as the common domestic fowl. In its height it seldom exceeds four feet.

The crowned crane belongs to the Ardea genus of the grallæ, according to the Linnean system; but Mr. Vigors, the truly scientific secretary of the Zoological Society, has attempted to establish another classification, and in his description of the Gardens and Menagery of the Zoological Society, speaking of this genus, he says, "In the methodical arrangements of Ray and Brisson, the storks formed a distinct genus from the herons and the cranes, with which, and with various other less closely-allied groupes, they were united in the Linnean system of classification. Later naturalists have, however, seen the necessity of reverting to the older method, and of again separating those groupes, which form, in the arrangement proposed by Mr. Vigors, two families, distinguished by well-marked characters, and each comprehending several genera of considerable numerical extent. The first of these families is the *Graidæ*, which comprise the cranes, the trumpeter, and other nearly-related genera, distinguished by the comparative shortness and obtuseness of their bill, and the slight degree of palmation exhibited by their feet, which are smaller in proportion, and consequently better adapted to the terrestrial habits of these birds, as the bill is to their vegetable food. The second is the *Ardeidæ*, whose generally pointed bill, and long, slender, and more deeply webbed toes are equally well suited to their aquatic habits, and to the nature of the food, chiefly fish and reptiles, on which they subsist.

In the latter family are not only comprehended the storks and the herons, but also the spoonbills, the ibis, and several other groupes, remarkable as well for the singularity of their forms, as for the peculiarity of their manners, and the interesting nature of many of the facts connected with this history, both as regards themselves, and with reference to the services which they actually render to mankind."

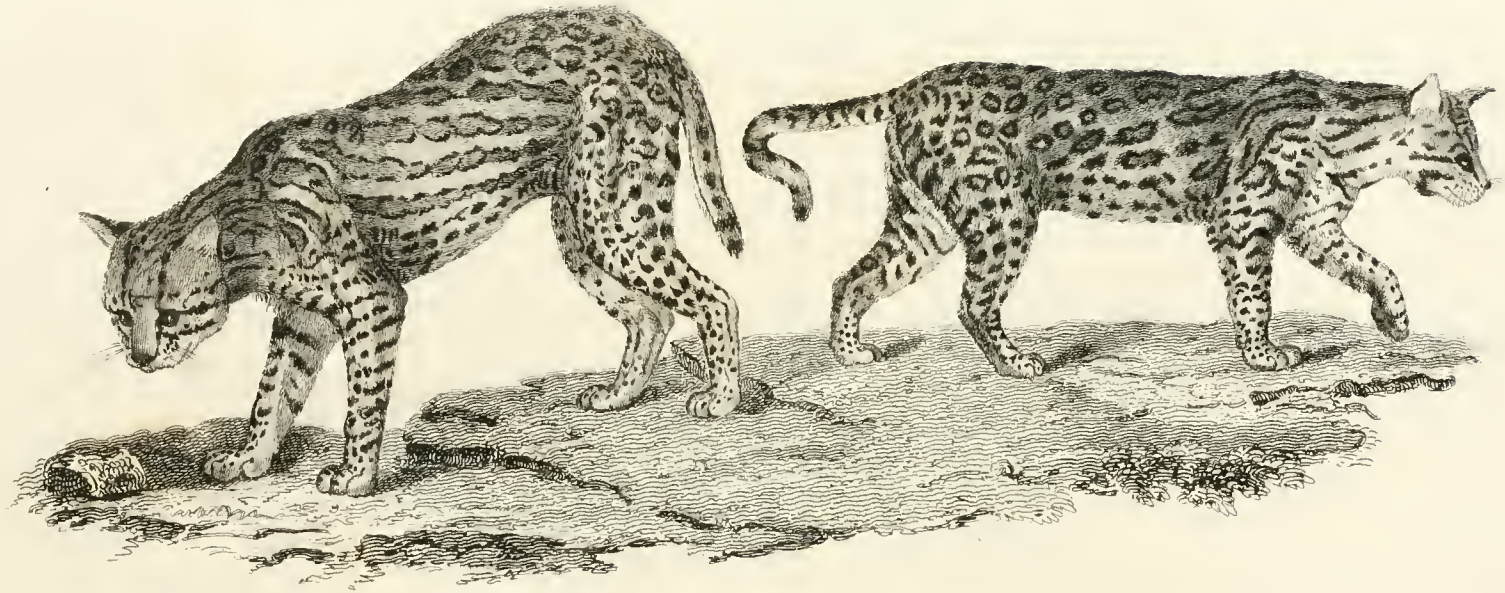
The common cranes are seen in numerous flocks in all the northern parts of Europe. They make their nests in marshes, and lay two bluish eggs: they feed on reptiles of all kinds, and on some species of vegetables. While corn is green, they are said to make such havoc in the fields as to ruin the farmers wherever the flocks alight.

They are migratory, returning northward in the spring, where they generally make choice of the places which they occupied during the preceding season, and in the winter inhabiting the warmer regions of Egypt and India. They fly very high, and arrange themselves in the form of a triangle, the better to cleave the air. When the wind freshens, and threatens to break their ranks, they collect their force into a circle, and they adopt the same disposition when attacked by powerful birds of prey. These migratory voyages are chiefly performed in the night; but their loud screams betray their course. During these nocturnal expeditions, the leader frequently calls, in order to rally his forces and to point out the track, and the cry is repeated by the flock, each answering, to give notice that it follows and keeps its rank. The flight of the crane is always supported uniformly, though it is marked by different inflections, and these variations have been observed to indicate a change of weather. The cries of these birds during the day forebode rain; and their noisy and tumultuous screams announce a storm. If in the morning or evening they rise upwards, and fly peacefully in a body, it is a sign of fine weather; but if they keep low, or alight on the ground, they menace a tempest. The crane seems to have considerable difficulty in commencing its flight. It runs a few paces, opens its wings, mounts a little way, and then having a clear space, it displays its vigorous and rapid pinions.

When the cranes are assembled on the ground they are said to set guards during the night; and the circumspection of these birds has ever been consecrated in ancient hieroglyphics as a symbol of vigilance.

Kolben relates that cranes are often observed in large flocks in the marshes about the Cape of Good Hope. He says he never saw a flock of them on the ground which had not some birds placed, apparently as sentinels on watch, while the others were feeding. These sentinels stand on one leg, and at intervals stretch out their necks, as if to observe that all is safe. When notice of danger is given, the whole flock rise on wing and fly away. Kolben goes so far as to assert, that in the night-time each of the watching cranes "holds in its right claw a stone of considerable weight, in order that if overcome by sleep, the falling of the stone may awaken it."

Cranes are seen in France in the spring and autumn; but they are for the most part merely passengers. It is on record that they formerly visited the marshes of Lincolnshire and Cambridgeshire in vast flocks, but none have of late been met with there.



THE OCELOTS.

In the Menagery of Mr Cross [illegible] Lewis Gordon

THE OCELOT.

IN THE MENAGERY OF MR. CROSS, KING'S MEWS, CHARING CROSS.

The Ocelot is, unquestionably, one of the most beautiful of the cat tribe, holding an intermediate station between the leopard and the domestic cat. It is smaller than the former, not exceeding, generally, three feet in length, and about one foot and a half in height. The length of its tail is about one foot. In the latter character, however, a very essential difference exists between the ocelot confined in the Tower, and that from which our drawing is taken. In the former, the length of the tail does not exceed six or seven inches, and we are led to believe that its abrupt stumpiness is not the general characteristic of the animal, but that it is purely accidental; for in the ocelot in the collection of Mr. Cross, the tail is full a foot in length, and curls at the end somewhat similar to the tail of the greyhound. We heard it, however, remarked by Mr. Cops at the Tower, that it is a very rare circumstance to meet with an ocelot with its tail complete, and therefore many zoologists have been misled on this point, and have been induced to consider the stumpiness of the tail as one of the natural characteristics of the animal. This variation in the appendage of the animal has induced some naturalists even to consider it as decisive of a distinct species, especially as the markings are also different; but we cannot coincide in that opinion, as the other generic characters of the two animals are in perfect correspondence.

The ground colour of the fur is gray, mingled with a slight tinge of fawn; this is beautifully marked with a number of longitudinal bands, the dorsal one being entirely black and uninterrupted; and the lateral ones, amounting to seven or eight on each side, compose a series of elongated spots, the margins of which are perfectly black, and the central parts of a deeper fawn than the general ground. These margins of black become black lines and spots on the neck and head and on the outer sides of the limbs. From the top of the head towards the shoulders there pass several diverging black bands, between which there is a single longitudinal, though somewhat interrupted narrow black line, occupying the centre of the neck above. The under parts of the body are whitish, spotted with black, and the tail, which is of the same ground colour as the body, is also covered with black spots. The ears are short and rounded, the external margin being black, surrounding a large central whitish spot.

The ocelot is a native of South America, inhabiting the deep forests of Mexico, Peru, and Paraguay. The animal in the Tower was presented to the King by the late Sir Ralph Woodford, Governor of Trinidad, under the name of the Peruvian tiger, from which the conclusion may be drawn, that it is a native of that country. The masculine gender of this animal is strongly depictured in the round, chubby shape of the head, exactly corresponding with the same characteristic in the male cat; on the other hand, the specimen in the collection of Mr. Cross being a female, possesses the milder traits incidental to the sex.

The native habits of the ocelot resemble those of the greater portion of its tribe, remaining during the day-time closely secluded in the depths of the forests, and prowling forth at night in search of its prey. There is, however, one trait in this animal which distinguishes it in general from some other species of the cat tribe, and which brings it into closer relation with the common domestic cat, which is, the astonishing agility with which it ascends the trees in pursuit of the birds, following them to their very nests, and devouring them on the spot with the feathers on. We have the authority of D'Azara for the latter coincidence, although it is in contradiction with the general habit of the animal

in a state of captivity, for if a bird be given to it, it does not devour the whole of the feathers, but proceeds in a very systematic manner to pluck it, always commencing its meal with the head, to which it appears particularly partial. The smaller quadrupeds, such as hares and rabbits, are also the object of its pursuit; indeed, in a state of confinement, it is sometimes fed on the latter. The ocelot, however, does not devour its food with the same rapacity which characterizes the other species of the ca tribe, nor in its appetite is it so insatiable.

The task of taming this animal would perhaps not be one of great difficulty, for D'Azara speaks of one which was so completely domesticated, as to be allowed to range whithersoever it pleased, evincing a strong attachment to its master, and never attempting to make its escape. In confinement, it is a most restless animal, continually pacing its cage backwards and forwards, which renders it an arduous task for the artist to obtain a correct outline of its form, for, unless in a state of sleep, it is scarcely ever two minutes in the same attitude.

The ocelot, according to D'Azara, is so common in Paraguay, that, within two miles of the town of St. Ignatius, eighteen were caught in two years; yet, notwithstanding this apparent abundance, it is very little known, because the dogs are very seldom able to find it, or to penetrate to its retreats. It passes the day in the most impenetrable recesses, and emerges from its retreat in dark and tempestuous nights, penetrating into the very courts and yards without the dogs perceiving it. On moonlight nights it does not frequent inhabited places, nor is it at that time ever caught in the snares which are laid for it. It is in vain to attempt to shoot it, because its sense of smell is so very acute, that it scents the hunter at a considerable distance, and immediately betakes itself to flight before the hunter can well obtain a sight of it. It has seldom or never been known to attack a man, although in defence of its young it possesses all the ferocity characteristic of the larger species of its tribe. It brings forth two at a time, and the breeding season generally commences about October; and it appears that every family of the ocelot has its separate district, as it happens that a male and female are always caught in the same place. They defend any encroachment upon their territory with the most determined ferocity, the male and female fighting promiscuously, and death is very often the consequence of these conflicts.

It has been observed, particularly by those who have watched the habits of this animal in a state of captivity, that it does not possess the cleanliness belonging to the cat tribe, as it appears that it always manifests a disposition to void its excrements in the vessel in which the water for its daily beverage is placed. This, however, is not observable in either of the animals confined in the Tower, or in the Menagery of Mr. Cross; on the contrary, their habits exhibit no other indications of uncleanliness, than what must naturally be the result of their state of captivity.

The power which the ocelot possesses of ascending trees is very remarkable. It is stated by M. Sonnini, that he has seen marks of the claws of the ocelot in the smooth bark of a tree, which was between forty and fifty feet in height, and which had not a single branch except at the top. He says that it was easy to remark the efforts which the animal had made; although he had pierced through the bark deeply into the wood, he had evidently slipped more than once, but he had surmounted every difficulty, and attracted no doubt by some prey peculiarly alluring, had attained the summit.

THE GANGES STAG.

THE GANGES STAG.

IN THE COLLECTION OF EARL DARNLEY, COBHAM HALL, KENT.

The deer are in general an active tribe, inhabiting principally wild and woody regions, and are to be found not only in almost all the temperate, but also the torrid climates of the world. The stag, of which our drawing is a correct likeness, was bred in France, and sent over to this country as a present to Lord Darnley. It is supposed to have been originally of an Indian breed, as its name implies; others assert that the epithet of Ganges is applied to it on account of its extraordinary size when compared with that of the common stag. Its general characteristics are long, cylindrical, ramified horns, inclining rather backwards, and slender sharp-brow antlers. The colour of the animal is generally a reddish brown, with some black about the face, and a black list down the hind part of the neck and below the shoulders. The hinder haunches are beautifully spotted like the roebuck, to which animal it bears a general resemblance. This stag appears to have a fine eye, an acute smell, and an excellent ear. He is a simple, and yet a curious and crafty animal. When hissed or called to at a distance, he stops short and looks steadfastly, and with a kind of admiration, at the objects which present themselves, and if they have neither arms nor dogs, he moves on unconcernedly and without flying. In general he is less afraid of men than of dogs, and is never suspicious, nor uses any arts of concealment, but in proportion to the disturbances he has received. He eats slowly, and is rather dainty in his aliment; after his stomach is full, he lies down and ruminates at leisure, but which appears to be performed with less facility than by the ox. It is only by violent shakes or hiccups that the stag can make his food rise from his first stomach, owing to the length and direction of the passage through which the aliment passes. The neck of the ox is short and straight, but that of the stag is long and arched, and therefore greater efforts are necessary to raise the food. These efforts are made by a kind of hiccup, the movement of which is apparent, and continues during the time of rumination. The stag, during the rutting season, bellows in a frightful manner; he is then so transported that nothing disturbs nor terrifies him; he is, therefore, easily surprised. Being loaded with fat, he cannot keep long before the dogs; but he is dangerous when at bay, and attacks the dogs with the greatest fury.

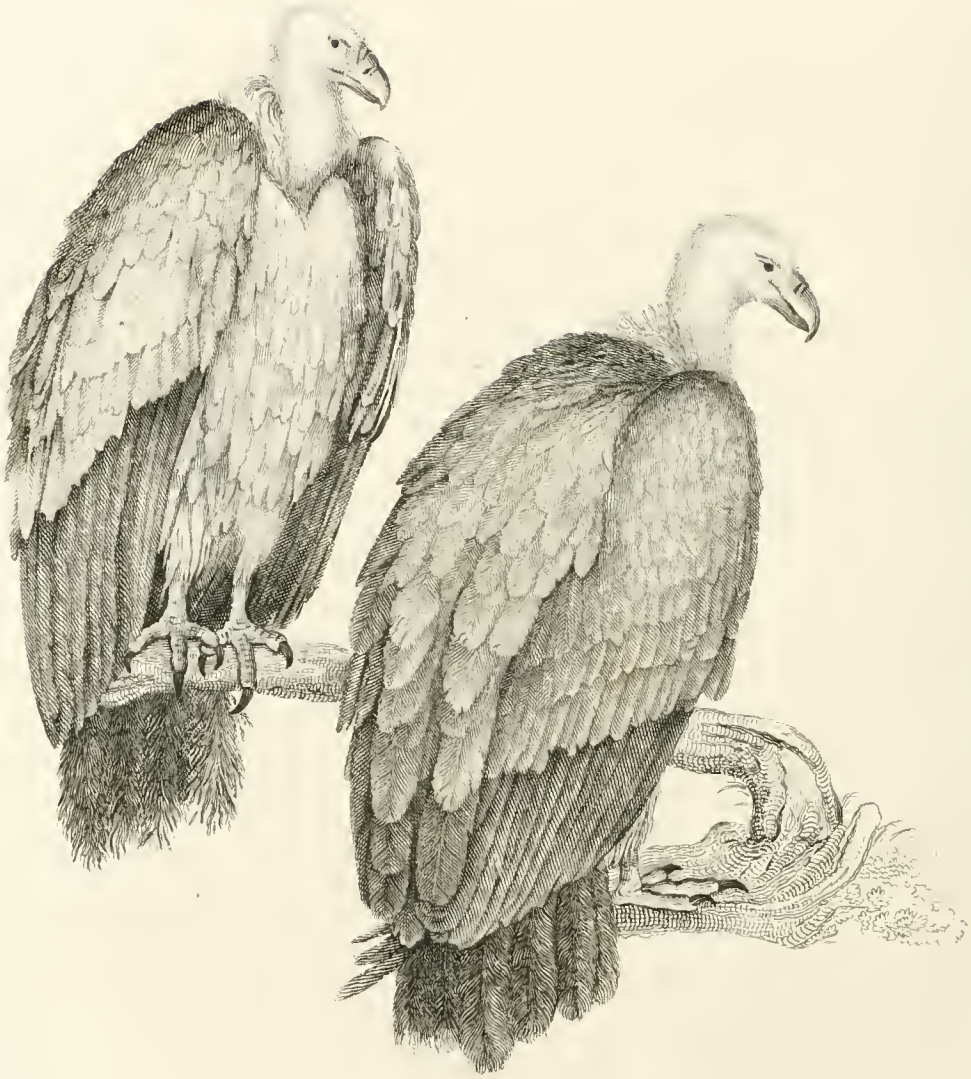
There is scarcely a country in which some species of the deer are not to be found, from the reindeer of the Laplander to the more beautiful but less useful stag of Ceylon. In the latter country the method of hunting the stag is very particular. The huntsmen go out in the night, and only two usually go together, one of whom carries upon his head an earthen vessel, in which there is some fire burning and flaming; the ingredients are generally small sticks cut into pieces and common resin. Of this the other man carries a supply about him to replenish the pot when the fire grows low. The person who has the fire upon his head, carries in one hand a staff, on which there are fixed eight bells, and the larger these are the better. The man goes first into the woods, and the other follows closely behind with a spear in his hand. As soon as the stag hears the noise of the bells, he turns towards the place whence the sound comes, and seeing the fire, he eagerly runs up to it, and stands gazing at a small distance; the second man has then nothing to do but to kill him with the spear. Not only deer, but even elks and hares are thus taken, for they gaze at the fire and never see the men. The profits of this sort of hunting are very large and the danger trifling; for although the woods abound with tigers, elephants, and wild-boars, the huntsmen are in no danger from them while the fire burns for they all run away from it.

The stag may be considered as one of those innocent and peaceable animals that seem destined to embellish the forest and animate the solitudes of nature. The elegance of his form, the lightness of his motions, the strength of his limbs, and the branching horns with which he is decorated, conspire to give him a high rank among quadrupeds, and to render him worthy of the admiration of mankind. It varies both in size and colour in different countries; but in North America it occasionally arrives at a larger size than on the old continent, with perhaps the exception of Siberia, where it is found of gigantic magnitude. Stags, in general, cast or shed their horns sooner or later in the month of March, in proportion to their ages. At the end of June they are full-grown, and the animal rubs them strongly against the boughs of the trees, or any other convenient object, in order to free them from the skin, which is now become useless, and by the beginning of August they assume the full strength and consistence, which they retain throughout the remainder of the year. The hinds go with young eight months and a few days, and seldom produce more than one fawn, which they bring forth in May or the beginning of June. In winter the stags and hinds of all ages keep together in flocks, which are almost more numerous in proportion to the rigour of the season. They separate in spring; the hinds retire to bring forth, and during this period, the flocks consist only of knobbers, that is, the fawns of about six months old, and young stags. In general the stags are inclined to associate, and nothing but fear or necessity obliges them to disperse. The life of the stag is spent in alternate plenty and want, vigour and debility, health and sickness, without having any change introduced into his constitution by these opposite extremes. He lives as long as other animals which are not subjected to such vicissitudes. As he grows five or six years, he lives seven times that number, or from thirty-five to forty years. The reports which have been promulgated concerning the longevity of the stag merit no credit. Virgil, for instance, in the following lines, gives the stag the enormous age of 2112

Terbinis deciesque super exit in annos
Justa senescentum quos implet vita virorum
Hos nonies superat vivendo garrula cornix,
Et quater egreditur cornicis secula cervus
Alipedum cervum ter vincit cornus; at illum,
Multiplicat novies phœnix reparabilis ales;

which may be anglicised,—that the raven liveth nine times the age of man; the stag liveth four times the age of the raven; the crow three times that of the stag; and the phœnix nine times the age of the crow; making the age of the phœnix to be 57,524.

In England the stag is become less common than formerly; its excessive viciousness during the rutting season, and the badness of its flesh, induce most people to part with the species. In the Highlands of Scotland stags are still found ranging over the vast hills of the north. Formerly the chieftains used to hunt them with the magnificence of eastern monarchs, assembling four or five thousand of their clan, who drove the deer into the toils, or to the stations in which the lairds had placed themselves; but as this pretence was frequently used to collect their vassals for rebellious purposes, an act was passed prohibiting any assemblies of that nature. Stags are likewise met with on the moors that border on Cornwall and Devonshire, and in Ireland on the mountains of Kerry, where they add greatly to the magnificence of the romantic scenery of the lake of Killarney. The stags of Ireland, during its uncultivated state, and while it remained an almost boundless tract of forest, had an exact agreement, in habit, with those that range at present through the wilds of America. They were less in body, but very fat, and their horns of a size far superior to those of Europe, but in all respects similar in form.



THE CONDORS MINOR, OR ASH COLOURED VULTURES.

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THE CONDUR MINOR, OR ASH-COLOURED VULTURE.

IN THE MENAGERY OF MR. CROSS, KING'S MEWS, CHARING CROSS.

In its generic characters this bird differs very little from the griffon vulture described page 25 of this work. It however differs from it in colour, it being of a uniform grey without any intermixture of black, by which some other species of the vulture tribe are distinguished. In size it approaches very near to the Lämmergeyer of the Alps, though inferior to that of the condur of the Andes. Its length is about four feet and a half, and its height rather more than two feet. The head is small, and like that of the griffon-vulture, and indeed of the majority of the vulture tribe, is denuded of feathers, presenting a whitish downy appearance, the object of which provision appears to be, to enable it to bury as it were its head in the carrion on which it feeds, without exposing its plumage to be soiled by the filth which it might otherwise contract. The eyes are large and black; the beak is black and hooked, having its base covered with a yellow cere; and the talons are large and extended.

This bird like all the vulture tribe is disgusting in its habits of feeding on offal and dead animals, and gorging itself with putrid carrion and other tainted flesh. The sloth, the filth, and the voracity of these birds almost exceed credibility. Whenever they alight on a carcass, that they can have liberty to tear at their ease, they gorge themselves in such a manner, that they become unable to fly, and, even if pursued, can only hop along. At all times they are birds of slow flight, and are unable readily to raise themselves from the ground, and when over-gorged, they are utterly helpless. On the pressure of danger, however, they have the power of ridding themselves of their burden, by vomiting up what they have eaten, and then they fly off with greater facility.

The peculiarities of habit by which the vultures are distinguished not only from the eagles, but even from the smallest of the falcon tribe, are the immediate consequence of their organization. Their beak, in their curvature, may be said to bear a strong resemblance to that of the eagles, and in other respects they possess many of the technical characters of the rapacious orders. But in one particular the vulture and the eagle differ essentially: the former satiates itself with its prey on the spot where it is found; whereas the latter is enabled, by the superior length and strength of its talons, to transport its prey through the air, and to consume it without fear of molestation in its mountain eyry. In the eagle it is the acuteness of its vision that enables it to discern the objects of its rapacity when hovering at an uncommon height above it; whereas in the vulture it is the acute sensibility of its nostril which directs it to its prey. One of the external characters which distinguish the eagle from the vulture, is the want of plumage on the head and neck, which in the majority of the latter species are covered with a kind of short down or smooth hairs; the eagle having those parts completely covered with feathers. The attitude of the vulture also presents a striking contrast with that of the eagle: the former is always seen bending forwards in a crouching position; whereas the latter always maintains a bold and upright posture.

The vultures are exceedingly numerous in the vicinity of the Pyramids, and numerous flocks of them are also found in Cairo. Every morning and evening they assemble with the kites in the square below the castle, in order to receive the alms of fresh meat that have been left to them by the legacies of various wealthy men. By the ancient Egyptians, these birds were esteemed sacred; and Herodotus informs us, that it was considered a capital crime to put one of them to death.

Notwithstanding the filthy habits of these birds, the inhabitants of the countries where they abound

cannot be too thankful to Providence for supplying them with these active scavengers to cleanse their towns and villages of the filth and putridity which otherwise, under a burning sun, would fill the atmosphere with the most noxious exhalations. In Palestine they are of infinite service in destroying the vast multitude of rats and mice which breed in the fields, and which without their assistance would devour the whole fruits of the ground. They also frequent the deserts, and there devour the bodies of men and animals which perish in those desolate regions. They every year follow the caravan from Egypt to Mecca in order to feast upon the flesh of slaughtered beasts, and the carcasses of the camels which die on the journey. So little are these birds alarmed by the presence of mankind, that they will not even quit the places which they haunt even when fired at with guns, but after a short flight they immediately return. If one of them be killed, the rest surround and devour it.

They frequent all the country in the vicinity of the Cape of Good Hope, and are so familiar, that they often descend in great numbers near the entrance to the shambles of Cape Town, and there devour the heads, entrails, and other offal of the animals slaughtered for the market. On the seashores they are also very abundant, voraciously devouring all such animal substances as have been thrown upon the coast by the tides. They subsist likewise on crabs, tortoises, shell-fish and even locusts. Ravenous, however, as these birds usually are, they are capable of existing for a great length of time without food. In the deserts their subsistence is sometimes very precarious. M. le Vaillant states that in the crop of some that he had killed, he found nothing but pieces of bark, or a small quantity of clay; in the crop of others he found only bones; and again in others the dung of animals. When urged by hunger, they are frequently known to devour their own species. Kolben says, it often happens that an ox returning home alone to its stall from the plough, lies down by the way; it is then, if the vultures perceive it, that they fall upon it with fury, and inevitably devour the unfortunate animal. They sometimes attempt the oxen in the fields, and to the number of a hundred or more make the sudden attack altogether.

The bodies of the vultures in general are extremely offensive to the smell, and they perch at night on rocks or trees with their wings partly extended, apparently to purify themselves. They soar sometimes to a vast height, and have in the air the sailing motions of the kite. Carrion and filth of almost every description are their favourite food, and from the acuteness of their scent, they can distinguish prey at an immense distance. They will even eat snakes, and sometimes seize on live lambs. When a dead body of any considerable size is thrown out, they may be observed coming from all quarters, each wheeling about in gradual descent till he reaches the ground. They are not easily driven from their prey, but when in the act of devouring it, they will suffer persons to approach very near them.

The condur of South America forms the type of a genus, a second species of which is the vulture papa of Linnæus, the king of the vultures of British writers. It has been observed, says Mr. Vigors, throughout the whole range of that immense chain of mountains which traverses the continent of South America, from the Straits of Magellan to the seventh degree of north latitude. It appears, however, to be much more common in Peru and Chili than in any other part of the chain; and is most frequently met with, at an elevation of from ten to fifteen thousand feet above the level of the sea.

THE PANTHER

THE PANTHER.

IN THE MENAGERY OF MR. CROSS, ROYAL MEWS, CHARING CROSS.

It is a very difficult point to determine whether the leopard and the panther be, in reality, distinct species, their generic characters being so exactly similar, and the only existing difference appearing to be in the greater or less degree of ferocity which the two animals exhibit, and, in some instances, the greater degree of magnitude, the panther being in general larger than the leopard. Gesner, speaking of the panther, says, "It is the name of the greater pardall, and the leopard of the lesser, which the Arabians call *alnemer* and *alfhead*. Alnemer is bigger than a linx, but like a leopard, having greater and sharper nailes and feete, blacke and terrible eies, and therefore stronger, fiercer, and bolder than the leoparde, for it setteth vppon men and destroyeth them." Oppianus describes both kinds in the following manner: "There are two kinds of pardals, a greater and a lesser: the greater (that is, the panther) are broader backt, and bigger in quantity; the lesser (that is, the leopard) being lesse in quantity, but not inferior in strength. Both of them have the same shape and colour of body, except in their taile, for the greater pardall hath the lesser taile, and the lesser the greater: either of them have solid and sound thighs, a very long body, bright seeing eies, the apples whereof do glisten under their eyelids, which are gray and red within, like to burning coales; their teeth pale and venomous; their skin of diuers colours, yet bright and pleasant, the spots standing like so many black eies upon it." In later times, Linnæus, not perceiving any grounds of distinction between the two animals, referred both names to the same one, and Buffon added a third, that of the ounce, and increased the confusion by describing, as the panther of the ancients, an animal of the old continent, the jaguar, which is now known to be peculiar to the new. It is, however, remarkable that later naturalists, especially Temminck, have fixed upon the comparative length of the tail, as observed above by Oppianus, as affording the only certain means of discrimination.

The length of the panther is usually more than six feet, exclusive of the tail, which is about three feet long. The colour of the upper parts of the body is bright fawny yellow, with numerous black, roundish, or somewhat annular marks, several of which have in the centre of each a black spot. The under parts of the body are white.

In nearly all its habits of life the panther resembles the tiger. Like that ferocious beast, it lurks in ambush amongst bushes or verdure, on the borders of the forest, and springs with a sudden and tremendous leap on such animals as pass by. So prompt, so rapid, and so well-timed are its movements, that few escape. In vain may the wretched victim seek for refuge even in the trees; the panther, notwithstanding the size and weight of its body, still pursues with an agility which seems almost incredible, and then despatches its victim. The ancient writers describe the panther as possessing more art and cunning than any other of the species. Volateranus especially makes mention of the stratagem which the panther uses to catch the monkies in Mauritania. Having driven them to the top of a tree, the panther stretches itself out at the foot, as if it were dead, holding its breath, shutting its eyes, and showing every other symptom of sudden death. The monkies behold their adversary from on high, but still they dare not descend. At last they choose one amongst them, whom they send down as a spy, who approaches the panther with every token of distrust. At last he ventures close to it, examines its eyes, ascertains whether it breathes, and being now confirmed in the

belief that their enemy is dead, the whole tribe descend from the tree, first running about the panther, and then leaping upon him with all the antics of apish joy. The panther allows them to carry on this sport for some time, while he watches for a favourable opportunity, when on a sudden he springs up, seizing some of his victims in his claws, and destroying as many as come within his reach. From this trait in the character of the panther arose the Latin proverb—*Pardi mortem assimulat.*

The panther has none of the noble qualities of the lion. His thirst for blood is insatiable, and his ferocity is such, that, even when subjugated, and in the power of man, he seems rather to be subdued than tamed. One of these animals, which was seen by M. de Buffon, had, he says, a ferocious countenance and a restless eye: his motions were precipitate, and his cry similar to that of an enraged dog, but more strong and harsh. This animal, like nearly all those that are brought into Europe, was a native of Barbary, and was taken in the forests adjacent to Mount Atlas.

The form of the panther is in general much more robust, and even, to a certain extent, more clumsy than that of the leopard. The character of the panther in his look appears to be deep, deliberate ferocity, and all the surliness of the most untameable of his species. The head of the panther is considerably larger, and at the same time somewhat shorter in proportion than that of the leopard, and the line of profile is more prominent above the eyes. These differences in form are accompanied by differences in colour and markings equally decisive. To the casual observer, the skin of the leopard and the panther appear to be the same, but the roses of the former, on a more minute inspection, will be found to be at a greater distance from each other, and to be divested of the spot which is perceptible in the centre of each rose of the skin of the panther. The rings towards the tip of the tail of the panther are also more distinct than in that of the leopard. Mr. Vigors, speaking of the jaguar, says, "It may not be useless to observe that of the figures given by Buffon in panthers and jaguars, that which is entitled the male panther is, in all probability, a leopard; the female is unquestionably a jaguar. The jaguars, both of the original work and of the Supplement, are either ocelots or chatis; and that which purports to be the jaguar or leopard, although probably intended for a chetah, is not clearly referable, by its form and markings, to any known species."

Conscious of their own undisputed superiority, which secures them against the attacks of other animals, the panthers never associate together in troops, but each with his female partner occupy a solitary den, which is most generally situate in the very depths of the forest. Hence, when urged by the calls of hunger, they sally forth in quest of their prey, which they seldom attack by open force; but the peculiar make of their feet, as is common with the whole of the cat tribe, enables them to steal on with noiseless tread; or they station themselves in ambush in such places as appear suitable to their purpose, where they watch, with indefatigable patience, the approach of their victim. Their motions are peculiarly characteristic of their habits and their mode of life. Incapable of long continued speed, their usual gait is slow, cautious, and stealthy, with their posterior limbs bent beneath them, and their ears distended to catch the most trifling noise. Guided by these organs, the internal structure of which is highly developed, they trace the sound of footsteps to an almost incredible distance, and direct themselves towards their prey with unerring certainty.

Although the sense of smell of the panther is not very acute, yet it manifests a strong partiality to the smell of spices and aromatic trees; in proof of which, Gesner relates that a panther was once taken by King Arsaces in Armenia and a golden collar put upon its neck, with this inscription: *Rex Arsaces Deo Nisæo*—(King Arsaces to the god Bacchus,) Bacchus being called Nisæus from Nisa, a city in India. The beast was very tame, and would suffer itself to be handled by any persons about the court, but once in the spring, having scented the odour of the aromatic trees, it ran away, and was taken at the lower part of the mountain Taurus, a hundred miles distant from the king's court of Armenia.

THE NIGHT HERON OF TARTARY.

THE NIGHT-HERON OF TARTARY.

IN THE MENAGERY OF MR. CROSS, KING'S MEWS, CHARING CROSS.

This bird may be considered as one of the smallest of the heron tribe, and is a very rare specimen in the menageries of this country. In height it is about one foot three inches, presenting, in other respects, the general characteristics of its species. Its colour is a light ash, inclining to white towards the bill, a jet black on the top of the back and on the crown of the head. The eye is very full, the iris being of a golden colour, the pupil a clear black. The bill is long, strong and sharp-pointed, the nostrils are linear, and the tongue pointed. In length it is about three inches, and, like the other species of its tribe, appears to be particularly adapted for catching fish.

The night-heron is now an extremely scarce bird, and is chiefly an inhabitant of Tartary and the adjacent countries. It was formerly known in Scotland, but in that country it is now wholly extinct. It inhabits the fens and marshes and the sides of rivulets, into which it is enabled to wade for the purpose of securing its prey, which generally consists of the smaller kinds of fish, as neither its size nor its strength will enable it to pursue the larger kinds, although, in some instances, it has been known to attack fish of five times its own magnitude, but, not being able to bear them off, has left them to be devoured by birds of more voracious appetite and greater muscular powers. The comparative shortness of its legs will not allow it to wade into deep rivers; on the contrary, it generally stands on the bank, watching the finny tribe as they pass, and so sure is its aim, that it seldom fails in wounding the object of its attack. Like all other herons, its appetite appears to be rather of a voracious nature, and it must be generally considered that the heron is one of the most formidable enemies of the scaly tribes. There is in fresh waters scarcely a fish, however large, that the heron will not strike at and wound, though unable to carry it off, but the smaller fry are his chief subsistence; these, pursued by their larger fellows of the deep, are compelled to take refuge in shallow waters, where they find the heron tribe a still more formidable enemy. His method is to wade as far as he can go into the water, and there patiently to await the approach of his prey, into which, when it comes within his sight, he darts his bill with inevitable aim. Willoughby says, he has seen a heron that had in his stomach no fewer than seventeen carp. Some gentlemen, who kept some herons, were desirous of ascertaining what average quantity one of these birds would devour. They consequently put several small roach and dace into a tub, and the heron, one day with another, ate fifty in a day. Thus a single heron is able to destroy nine thousand store carp in half a year.

The heron, though he usually takes his prey by wading, frequently catches it while on the wing, but this is only in shallow waters, where he is able to dart with more certainty than in the deep; for in this case, though the fish, at the first sight of its enemy, descends, yet the heron, with its long bill and legs, instantly pins it to the bottom, and thus seizes it securely. In this manner, after having been seen with its neck for above a minute under water, he will rise on wing with a trout or an eel struggling in his bill. The greedy bird, however, flies to the shore, swallows it, and returns to his fishing.

The different parts of the body of the heron are admirably adapted to its mode of life. The bird has long legs, for the purpose of wading; a long neck, answerable to these, to reach its prey in the water, and a wide throat to swallow it. The toes are long and armed with strong hooked talons, one

of which is serrated on the edge, the better to retain the fish. The bill is long and sharp, having towards the point serratures which stand backward ; these, after the prey are struck, act like the barb of a fish-hook, in detaining it till the bird has time to seize it with its claws. Its broad, large and concave wings are of great use in enabling it to carry its load to the nest, which is sometimes at a great distance. Dr. Derham tells us, that he has seen lying scattered under the trees of a large heronry, fishes many inches in length, which must have been conveyed by the birds from the distance of several miles ; and D'Acre Barret, Esq., the owner of the herony, saw a large eel that had been conveyed thither by one of them, notwithstanding the inconvenience that it must have experienced from the fish writhing and twisting about.

One of the largest heronries in the country is at present in the park of Lord Darnley, at Cobham, in Kent ; but the destructive habits of these birds, not only in regard to the trees on which they have fixed their residence, but also to the gradual exhaustion of the fish in the neighbouring ponds, render them by no means an acquisition.

In regard to the immediate subject now under discussion, the rarity of it renders all knowledge of its peculiar habits exceedingly difficult of attainment. To form a just estimate of the nature or character of an animal in a state of captivity cannot rationally be expected, nor does it fall within the sphere of those to whom the animal belongs to make themselves intimately acquainted with the natural history of the different specimens which they have to exhibit. It is only, therefore, by investigation and research into antecedent authorities that we are able to arrive at any accurate knowledge of the natural history of animals ; and when we take into our consideration the numerous obstacles and difficulties which present themselves to the naturalist in his examination of the nature and habits of the scarcer subjects of the animal kingdom, our surprise need not be great at the many inconsistencies, and falsifications which exhibit themselves in the delineations of different naturalists, and which are received as actually true on the authority of the name of some celebrated and scientific man. We find ourselves thus situated in the description of the natural history of the bird now under our discussion ; neither Edwards, Pennant, nor any of the other celebrated ornithologists of this country—nor in Buffon, nor in the Supplement edited by Lesson, do we meet with any enlarged detail of the habits or character of this bird. We are simply instructed in its classification, but of its mode of life, economy, instinct or disposition, very little indeed has been transmitted to us. Of the origin of its name, the night-heron, which would seem to imply that it is a nocturnal bird, we have not any thing in the construction of its eye which would lead us to suppose that it was able to obtain its food during the night ; and the very objects on which it is generally in search for its subsistence, contradict the hypothesis that its habits assimilate in the least to the *strix* genus.

The body of this heron is very small, and, like all others of its tribe, exceedingly lean ; the skin is said to be scarcely thicker than what is called gold-beaters' skin. It is most probable that this bird is capable of long abstinence, as its usual food consists of fish, and reptiles which cannot at all times be had. Its food, in its present state, is fish and meat, which it takes from a little reservoir of water placed in its cage for that purpose.

THE BACTRIAN CAMEL,

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The camel is a genus of quadrupeds belonging to the order of *pecora*, of which there are seven species. The first is the dromedary or Arabian camel with one bunch or protuberance on its back; the second is the Bactrian camel, having two bunches on its back, but in all other respects resembling the dromedary. The generic characters of the camel are that it has no horns, having six front teeth in the lower jaw, rather thin and broad. The laniarii are widely set, three in the upper and two in the lower jaw; and there is a fissure in the upper lip resembling a cleft in the lip of a hare. It has four stomachs, feeds entirely on vegetables, and ruminates like the ox. The feet are armed with cloven hoofs, partly like the hoof of a horse; for a horny sole spreads from the heel forward under the foot, uniting the middle part, and leaving the toes free. This horny sole is part of an elastic substance, which, being bedded in two cavities of the foot, yields to the pressure of the soil; whilst the toes spread upon touching the ground in the same way that the rein-deer's foot extends to present a large surface to the snow. The foot of the camel is, however, adapted to tread upon a smooth surface, whether that surface be hard or soft.

The Bactrian camel, which is very common in Asia, is extremely hardy and in great use amongst the Tartars and Mongols as a beast of burthen, from the Caspian sea to the empire of China. It bears even so severe a climate as that of Siberia, being found about the lake Baikal, where the Burats and Mongols keep great numbers. It is said to be found wild in the northern parts of India, and in the deserts bordering on China, and is more esteemed for swiftness than the Arabian camel. In Arabia they are trained for running matches, and in many places for carrying couriers, who can go above a hundred miles a day on them, and that for nine consecutive days over burning deserts, uninhabitable by any living creature. The African camels are the most hardy, having more distant and more dreadful deserts to pass over than any of the others, from Numidia to the kingdom of Ethiopia. In western Tartary there is a white variety, very scarce, and sacred to the idols and priests. The Chinese have a swift variety, which they call by the expressive name of Fong Kyo Fo, or camels with feet of the wind.

The riches of Arabia have consisted in camels from the time of Job to the present day. The Patriarch reckoned 6000 camels among his pastoral treasures; and the modern Arabs estimate their wealth by the numbers of these useful animals: without them a great part of Africa would be wretched; by them the whole commerce is carried on through arid and burning tracts, impassable but by beasts, which Providence has formed expressly for those scorching deserts. Their great powers of sustaining abstinence from drinking, enable them to pass over unwatered tracts for many days, without requiring the least liquid; and their patience under hunger is such that they will travel many days fed only with a few dates, or some small balls of bean or barley-meal, or on the miserable thorny plants of the deserts. They seem to prefer wormwood, thistles, nettles, broom, cassia, and other prickly vegetables, to the softest herbage. As long as they find plants to browse, they easily dispense with drink. The faculty, however, of abstaining long from drink proceeds not from habit alone, but is rather an effect of their structure. Independently of the four stomachs, which are common to ruminating animals, the camels have a fifth bag, which serves them as a reservoir for water. This fifth

stomach is peculiar to the camel, and it is so large as to contain a vast quantity of water, where it remains without corrupting, or mixing with the other aliments. When the animal is pressed by thirst, and has occasion for water to macerate its dry food in ruminating, he makes part of the water mount into his paunch, or even as high as the œsophagus, by a simple contraction of certain muscles. It is by this singular construction that the camel is enabled to pass several days without drinking, and to take at a time a prodigious quantity of water, which remains in the reservoir pure and limpid, because neither the liquors of the body, nor the juices of digestion can mix with it. Travellers, when much oppressed with drought, are sometimes obliged to kill their camels in order to have a supply of drink from these reservoirs.

The ancients have held that camels are in a condition for propagating at three years of age; but this assertion is attended with suspicion, for in three years they have not acquired half their growth. The time of gestation is nearly twelve months, and, like all large quadrupeds, the females bring forth only one at a birth. The young camel sucks its mother twelve months; but, when meant to be trained in order to render him strong and robust in the chase, he is allowed to suck and pasture at freedom during the first four years, and is not loaded nor made to perform any labour, until he be four years old. The milk is copious and thick, and, when mixed with a large quantity of water, affords an excellent nourishment to them. The females are not obliged to labour, but are allowed to pasture and to breed at full liberty. The advantage derived from their produce and their milk is perhaps superior to what would be drawn from their working. In general, the fatter the camels are, the more capable they are of enduring great fatigue. Their bunches seem to proceed from a redundance of nourishment, for during long journeys, in which their conductor is obliged to husband their food, and when they often suffer great hunger and thirst, these bunches gradually diminish and become so flat, that the place where they were is only perceptible by the length of the hair, which is always longer on those parts than on the rest of the back. The meagreness of the body augments in proportion as the bunches decrease. The Moors, who transport all sorts of merchandise from Barbary and Numidia as far as Ethiopia, set out with their camels well laden, which are very fat and vigorous, and they bring back the same animals so meagre that they commonly sell at a low price.

The general height of the camel, measured from the top of the dorsal bunch to the ground, is about six feet and a half, and from the top of the head, when the animal elevates it, not less than nine feet. The head, however, is generally so carried as to be nearly on a level with the bunches, or rather below them, as the animal bends its neck in its general posture. The head is small, the neck very long; the body of a long meagre shape, the legs rather slender, and the tail, which is slightly tufted at the end, reaches to the joints of the hinder legs.

The camel is generally of a dusky brown colour with a rusty tinge. Its hair is very fine, and is employed for making pencils for painters and in the manufacture of various stuffs. It attains its full strength at about the age of six years, and lives about forty or fifty years.

If we consider, under one point of view, all the qualities of this animal and all the advantages derived from him, it must be acknowledged that, in point of utility, he is not inferior to any other known quadruped. Gold and silk constitute not the true riches of the East; the camel is the genuine treasure of the East. He is more valuable than the elephant, and perhaps in utility is equal to the horse, the ass, and the ox, when their powers are united. The flesh of a young camel is as good and wholesome as veal. The Africans and Arabs fill their pots and tubs with it, which is fried with grease and preserved in this manner during the whole of the year for their ordinary repast.

THE GREAT HARPY EAGLE, AND BALD OR WHITE-HEADED SEA-EAGLE.

THE GREAT HARPY EAGLE. THE BALD, OR WHITE-HEADED SEA EAGLE.

IN THE COLLECTION OF MR. CROSS, ROYAL MEWS, CHARING CROSS.

The eagle has generally been considered by mankind as holding the same fabulous or imaginary dominion over the birds which has been attributed to the lion over quadrupeds. Buffon, adopting this idea, is also of opinion that the eagle and the lion have many points of resemblance, both physical and moral. Magnanimity, he says, is equally conspicuous in both: they despise the small animals, and disregard their insults. It is only after a series of provocations, after being teased with the noisy or harsh notes of the raven or magpie, that the eagle determines to punish the temerity or the insolence of these birds with death. Besides, both disdain the possession of the property which is not the fruit of their own industry, rejecting with contempt the prey which is not procured by their own exertions. Both are remarkable for their temperance: the eagle seldom devours the whole of his game, but, like the lion, leaves the fragments and offals to other animals.

The eyes of the eagle have the glare of those of the lion, and are nearly of the same colour: the claws are of the same shape; the organs of sound are equally powerful, and the cry equally terrible. It must, however, be observed that, notwithstanding the assertion on the part of Buffon and other naturalists, the voice of the lion and the eagle will not bear any comparison. The one is a deep and dreadful bass, the other a piercing treble, altogether destitute of majesty.

It is impossible to tame the eagle unless he be caught in his infancy. We are, however, informed by certain writers that the eagle was anciently used in falconry, although this practice is now laid aside, for he is too heavy to be carried on the hand; nor is he ever rendered so tame or so gentle as to remove all suspicions of danger. His bill and claws are crooked and formidable; his figure corresponds with his instinct; his body is robust; his legs and wings are strong; his flesh is hard; his bones are firm; his feathers stiff; his attitude bold and erect; his movements quick; his flight rapid. He rises higher in the air than any other of the winged race: he can distinguish objects at an immense distance, but his power of smell is inferior to that of the vulture. By means of his exquisite sight he pursues his prey, and when he has seized it, he checks his flight, and places it upon the ground to examine its weight, before he carries it off. Though his wings are vigorous, yet, his legs being stiff, it is with difficulty he can rise, especially if he be loaded. He is able to bear away geese and cranes, and also carries off hares, lambs, and kids. When he attacks fawns or calves, he instantly gluts himself with their blood and flesh, and afterwards transports their mangled carcasses to his nest.

In regard to the harpy eagle, its generic characters and habits differ so little from the eagle of the Andes, described in page 55 of this work, that any further detail may be deemed superfluous; but, respecting the bald or white-headed sea eagle, some very interesting accounts have been transmitted to us by Mr. Wilson, who, speaking of that bird, says, "Elevated on the high, dead limb of some gigantic tree, that commands a wide view of the neighbouring shore and ocean, he seems calmly to contemplate the motions of the various feathered tribes, that pursue their busy avocations below: the snow-white gulls slowly winnowing the air; the busy tringæ coursing along the sands; trains of ducks streaming over the surface; silent and watchful cranes—intent and wading; clamorous crows

and all the winged multitudes that subsist by the bounty of this vast magazine of Nature. High over all these hovers one whose action instantly arrests his attention. By his wide curvature of wing and sudden suspension in the air he knows him to be the fish-hawk, settling over some devoted victim of the deep. His eye kindles at the sight, and, balancing himself with half-opened wings on the branches, he watches the result. Down, rapid as an arrow from heaven, descends the distant object of his attention, the roar of its wings reaching the ear as it disappears in the deep, making the surges foam around. At this moment the eager looks of the eagle are all ardour, and levelling his neck for flight, he sees the fish-hawk once more emerge, struggling with his prey, and mounting in the air with screams of exultation. These are the signal for our hero, who, launching into the air, instantly gives chase, and soon gains on the fish-hawk. Each exerts his utmost to mount above the other, displaying in these rencontres the most elegant and sublime aërial evolutions. The unincumbered eagle rapidly advances, and is just on the point of reaching his opponent, when, with a sudden scream, probably of despair and honest execration, the latter drops his fish: the eagle, poising himself for a moment, as if to take a more certain aim, descends like a whirlwind, snatches it in his grasp, ere it reaches the water, and bears his ill-gotten booty silently away to the woods."

Sometimes, however, the fish-hawks assemble in bands too numerous for him to encounter, and he is driven to hunt for himself. He then usually retires inland, and occasionally destroys great numbers of young pigs and lambs. At other times he contents himself with fowl; and ducks, geese, and gulls fall victims to his insatiable appetite. His nest is commonly built on the top of large trees, generally a pine or a cypress, and growing in the midst of a morass. It is formed of sticks, sods, hay, moss, and other similar materials; and being repaired and added to year after year, at length becomes a large black prominent mass, observable at a considerable distance. The number of eggs laid by the female is generally two, and the young birds are nurtured by their parents with the greatest care. Fishes are sometimes carried to the nest in such numbers that their putrid remains lay scattered about the place, and scent the air to the distance of several hundred yards. The old birds continue to feed their offspring for a considerable time after the latter has become capable of quitting the nest.

The full grown bird measures upwards of three feet in length from beak to tail, and more than seven in the expanse of its wings. The young are at first covered with a thick whitish or cream-coloured cottony down; they presently become of a gray colour as their plumage developes itself, and continue of a brown gray until the third year, when the white begins to make its appearance upon the head, neck, tail-coverts, and tail. These by the end of the fourth year are completely white, or at the most very slightly tinged with cream colour. The eye is at first hazel, but gradually brightens into a brilliant straw-colour; as the plumage of the head becomes white, the quill-feathers and primary wing-coverts are black, with their shaft of a pale brown; the secondary are considerably lighter, and the tail, which projects in a trifling degree beyond the extremities of the wing, is brown on the outer quills and of a mixed white and brown on the inner: the under surface, as far backwards as the middle of the belly, is of a much lighter shade than the upper, being of a dull white with numerous broad streaks of pale brown. The beak is of a dusky brown, the cere and legs of a golden-yellow; the iris somewhat lighter, and the talons a deep blackish-brown. The bird is usually spoken of as inhabiting the northern parts both of the old and new continent, but it appears to be only a rare and occasional visitant of the former.

W. Barraud del. et sculp.

THE ROEBUCK.

In the Collection of Earl Darnley, Cobham Park.

THE ROEBUCK.

IN THE COLLECTION OF EARL DARNLEY, COBHAM HALL.

This species of deer is now almost extinct in this country. It was formerly very common in Wales, in the north of England, and in Scotland, but at present the species exists no longer in any part of Great Britain, except in some of the remote parts of the Scottish Highlands. In France they are more frequent; in fact, the animal from which we have taken our present drawing is a native of that country, having been presented to its noble owner by the Duke of Orleans. They are also found in Italy, Sweden, and Norway, and, according to Bell, in some parts of Siberia. The first that are met with in Great Britain are in the woods on the south side of Loch Rannock, in Perthshire; the last in the forest of Langwal, on the southern borders of Caithness; but they are most numerous in the beautiful forests of Invercauld, in the midst of the Grampian Hills. In Ireland they are totally unknown.

The roebuck is the least of the deer-kind, being only about three feet nine inches long, and two feet three inches high before, and two feet seven behind. The weight averages from fifty to sixty pounds. The horns are from eight to nine inches long, upright, round, and divided into only three branches; their lower part is fulcated likewise, and extremely rugged, and is made into handles for knives, &c.—The horns of a young buck in its second year are quite plain; in its third year, a branch appears, but in its fourth its head is complete. The body is covered during winter with very long hair, well adapted to the rigour of the Highland air; the lower part of each hair is ash-colour; near the ends is a narrow bar of black, and the points are yellow. The hairs on the face are black, tipped with ash-colour; the ears are long, their insides of a pale yellow, and covered with long hair; the spaces bordering on the eyes and mouth are black. During summer, its coat has a very different appearance, being very short and smooth, and of a bright reddish colour. The chest, belly, and legs, and the inside of the thighs, are of a yellowish white; the rump is of a pure white; the tail is very short. On the outside of the hind leg, below the joint, is a tuft of long hair.

The make of the roebuck is very elegant, and formed for agility. The eyes are more brilliant and animated than those of the stag; his limbs more nimble, his movements quicker; and he bounds, seemingly without effort, with equal vigour. He never wallows in the mire like the stag, but delights in dry and elevated situations, where the air is purest. He is likewise more crafty, conceals himself with greater address, is more difficult to trace, and derives superior resources from instinct; for although he has the misfortune to leave behind him a stronger scent than the stag, which redoubles the ardour and appetite of the dogs, he knows how to withdraw himself from their pursuit, by the rapidity with which he begins his flight and by his numerous doublings. He delays not his arts of defence till his strength fails him, but as soon as he finds that the first efforts of a rapid chace have been unsuccessful, he repeatedly returns on his former steps, and often confounds, by these opposite movements, the direction he has taken; after intermixing the present with the past emanations from his body, he rises from the earth by a great bound, and retiring to a side, he lies down flat on his belly, and in this immovable situation, he allows the whole troop of his deceived enemies to pass very near him.

The roebuck differs from the stag and fallow-deer in disposition, temperament, manners, and almost every natural habit. Instead of associating in herds, they live in separate families. The father,

mother, and young go together, and never mix with strangers. They are constant in their amours, and never unfaithful like the stag. Though always together, they feel the ardour of the rut but once a year, and it continues only fifteen days, commencing at the end of October. During this period they do not suffer their fawns to remain with them; but after the rutting-season is past, these return to their mother and remain with her some time, after which they separate for ever, and remove to a distance. The female goes with young five months and a half, and brings forth about the end of April, producing two at a time, which she is very careful to conceal, although, in spite of her vigilance, the young are sometimes carried off by men, dogs, or wolves.

The roebuck is a tender animal, incapable of bearing great cold. According to Buffon, the species in Burgundy, in the hard winter of 1709, was almost destroyed, and many years passed before it was restored again. In Pennant it is stated, that in Scotland it is found very difficult to rear the fawns, it being computed that eight out of ten of those that are taken from their parents die. This, however, may not be so much attributable to the climate as to the sudden change of food, and its not agreeing with the natural constitution of the animal.

The flesh of the roebuck is reckoned a most delicate food. In summer it feeds on grass, and is very fond of the *rubus saxatilis*, called in the Highlands the roebuck-berry; but in the winter-time, when the ground is covered with snow, it browses on the tender branches of fir and birch.

According to the *Leges Wallicæ*, a roebuck was valued at the same price as a she-goat; a stag at the price of an ox, and a fallow-deer was esteemed equal to a cow, or, as some report, to a she-goat.

It may not be deemed irrelevant to our present subject, to shew that by the aid of comparative anatomy, Ireland was once the domicile of the roebuck, and various kinds of deer, which are not only scarce in the old world, but some of the species appear to be actually extinct, so that they may be possibly ranked among those remains which fossilists distinguish by the title of Diluvian. The horns, which are often found in Ireland, are evidently of the stag-kind, but much stronger, thicker, heavier, and furnished with finer antlers than those of the present race. Those found in Ireland must be referred to the elk-kind, but of a species different from the European, being provided with brow antlers, in which the former are deficient; neither are they of the moose-deer, or American, which entirely agrees with the elk of Europe, and entire skeletons of which are sometimes met with lodged in a white marl. Some of these horns are nearly twelve feet between tip and tip; but not the faintest account, traditional or historical, is left of the existence of these animals in our kingdom.

THE JACKALS.

In the Royal Menagerie, Tower of London.

THE JACKALS.

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The wolf, the dog, and the jackal may be considered as varieties of the same species, the only difference existing being in their natural habits, accordingly as they present themselves in a wild or domesticated state. The jackal, however, has not long been known in this country; for previously to the time of Pennant, no specimen had ever been known in England, and consequently the descriptions which appeared of it were vague and unsatisfactory, and intermixed with those fabulous reports, with which the natural history of many foreign animals is disfigured. This circumstance must naturally excite our surprise when we consider, that our commercial relations have been very extensive with several countries where the jackal abounds, and that those relations existed for nearly a century before any living specimen was brought to this country. It is to be found in all parts of the eastern world, in Africa, from the Cape of Good Hope to Barbary, in Syria, Persia, and in all the provinces of southern Asia. From the circumstance of the jackals going in troops of forty, fifty, or even two hundred at a time, and, on the other hand, from the fox being a solitary animal, it has been considered by some of the ablest commentators on the sacred writings, that the three hundred foxes, to the tails of which Samson tied firebrands, were in reality jackals, and not foxes.

The specimens in the Tower differ considerably in size; the average length is about two feet, and the height seldom exceeds more than a foot and a half. The general colour of the animal is a pale fulvous. The head is of a fox-red above, mixed with ash-grey hairs, having each a blackish ring and tip; the upper lip is of a lighter shade on each side of the nose, and the throat is of the same colour; the whiskers, the long hairs on the chin, and those above the eyes are black; the ears are fox-red externally, and lighter internally, the neck and back are a greyish yellow, dashed with a shade of dusky; the under parts of the body and the legs are of a light reddish yellow, but the shoulders and thighs are externally of a fox-red; the claws are black, the tail straight and bushy, and more hairy than in the wolf, and of a greyish yellow, but descending only to the foot. The hair of the jackal is stronger and coarser than that of the wolf, and between the hairs there is a woolly fur of a grey colour. The four middle front teeth are of a truncated form, as if cut off flat, not perceptibly notched nor indented; the two exterior larger ones in the upper jaw are somewhat carinated; in the lower law they are rounded. The canine teeth in the upper jaw are somewhat larger than in the under; the grinders are six on each side. In its external figure the jackal resembles the wolf, being considerably larger than the fox. In regard to size, however, the animals in the Tower must not be considered as a just criterion, two of them being even smaller than the fox, and the other very little superior to it.

The jackals, in numerous troops, hunt like hounds in full cry, from evening till morning. They are no less destructive to poultry than the wolf, ravaging the streets, villages, and gardens, and even destroying children if they be left unprotected. To the natives of the hot countries the jackal is of the same essential service as the hyæna and the vulture; for as it is not required that the prey should be living on which it feeds, it seeks the bodies in a state of decomposition, and the air thereby becomes purified of the putrescent effluvia. Like the hyæna, the jackal is generally to be found in the vicinity of armies or in the track of the caravans, for the purpose of feasting on the slain, or devouring the offals of the animals which die on the journey. When it cannot obtain animal food it will feed on fruits and roots; for, like the fox, it burrows in the earth, and lies there

all the day, coming out at night to hunt. The prevalent notion that the jackal is the purveyor of the lion is wholly founded in error. It is well known that the scent of the lion is not very acute, which is a wholly different case with the jackal, and lured on by the power of its scent, it fills the air with the most horrid howlings whenever it begins the chace. This sound is echoed by a hundred similar voices ; the lion, panther, and other beasts of prey take advantage of the general consternation, and follow the jackals in silence, till they have hunted down their prey, when they come up and devour the fruits of the jackals' labours, leaving them only the remains of the spoil.

The shriek of the jackal has been often described, and by many writers has been designated as more terrific than the roar of the tiger or the howl of the hyæna. In this report, however, a great deal must be laid to the account of the particular circumstances under which the sound is heard. Captain Beechey, in his expedition to explore the northern coasts of Africa, speaking of the " chacal's shriek," says, " the cry of the jackal has something in it rather appalling when heard for the first time at night ; and as they usually come in packs, the first shriek which is uttered is always the signal for a general chorus. We hardly know a sound which partakes less of harmony than that which is at present in question ; and, indeed, the sudden burst of the answering long-protracted scream, succeeding immediately to the opening note, is scarcely less impressive than the roll of the thunder-clap immediately after a flash of lightning. The effect of this music is very much increased when the first note is heard in the distance, a circumstance which often occurs, and the answering yell bursts out from several points at once within a few yards or feet of the place where the auditors are sleeping."

A variety of opinions exists in regard to the domestication of the jackal, supposing that such a thing were desirable. Shaw says, that when taken young it is easily tamed, attaches itself to mankind, distinguishes its master, comes on being called by its name, shews an attachment to dogs instead of flying from them, and has all the other peculiarities of character by which the dog is distinguished. On the other hand, it has been stated, that the difficulty of the domestication of the jackal arises from two causes, the first of which is the strong odour which he emits, which in filthiness is equal to that of the fox, and the other is the extreme timidity which is evinced by the animal at the approach of a stranger, and this is particularly observable in the animals from which our drawing is taken. Their den is no sooner approached than they appear to be in a state of alarm, and exhibit all the uneasiness which is generally the attendant of a savage animal in a state of confinement ; and it is probably owing to that very state, that the dispositions of the animal display themselves in a wholly different manner than when in its savage one ; for Captain Beechey says, that he has frequently gone close up within a few yards of a jackal in the wild state before he would turn to walk away.

The female breeds only once a year, goes with young about four weeks, and brings forth from six to eight at a time. There is, however, an instance on record in which the female jackal whelped in this country, and the whelps were at first as blind as those of the dog.

THE WANDOROW, OR OUANDOROU.

THE COAITA, FOUR FINGERED OR SPIDER MONKEY.

In the Collection of [illegible]

THE WANDEROW, OR OUANDOROU MONKEY.—THE COIATA, FOUR-FINGERED OR SPIDER MONKEY.

IN THE COLLECTION OF MR. CROSS, ROYAL MEWS, CHARING CROSS.

The different species of monkeys are included in the first order of Primates, the principal characteristic of which is an erect posture, and in some other particulars resembling the human race. They have usually four cutting teeth in the fore part of each jaw, and in the upper jaw these are parallel. They have one canine tooth on each side of these in each jaw. They have also two breasts or teats, from which this class of mammalia derives its name. The two fore-feet in many of the individuals resemble the hands of the human species, and are employed for the same purposes, having fingers, furnished for the most part with oval flattened nails. They live chiefly on vegetable food.

The Wanderow, or Ouandorou of Buffon, belongs to the class of the makis, and is distinguished by a blunt and elongated muzzle; it must, however, be stated, that the characters of the makis are rather comparative than essential, the principal of which are four incisors in each jaw, two canines rather strong, five tuberculous molares above and below, callosities at the hips, as have the greater part of the monkies of the ancient continent; the muzzle moderately large and long, the facial angle being about 40 or 50 degrees; the nostrils approximate, in an oblique direction with the upper part of the muzzle; flat ears, naked, far apart, and pointed at the outer extremity: the comparative shortness of the tail, which rarely exceeds a third of the length of the body, and which, in some species, is nearly reduced to the stumpiness of a pigtail, and in one or two others is nothing more than a tubercle. The body of the Wanderow is a deep black throughout on the back, as well as the thighs and legs, and under the belly it has a greyish cast. The front is covered like its body with black hair, and its face is surrounded with a long beard or mane, which descends on each side of the face in the form of a ruff, extending downwards over the chest, and varying from an ash-grey to a pure white. The tail is black, and terminated by a tuft of long hairs, similar to the lion, which circumstance induced Pennant to give the animal the appellation of the lion-tailed monkey. The colour of the Wanderow is, however, by no means fixed, for, according to the report of several travellers, it appears that, independently of the black or grey Wanderow, there are some of a greyish-white, with a white beard, and others which are wholly white.

The name of Ouandorou is given in Ceylon, not only to the present species, but also to the purple-faced ape, and according to Virey it is applied principally to the monkies of a vicious disposition, who commit numerous outrages on women, and sometimes finish by strangling them. It is even said, in the historical description of the kingdom of Macassar, that the natives of that country, who are exceedingly jealous of their wives, do not hesitate to give a sound thrashing with a cane to these monkey gallants, who evince a disposition to caress their wives. In other respects, these animals are very active, but they are difficult to tame, for they appear to be particularly fond of their independence. They grow to the size of about three feet and a half, but their constitution is not well adapted to the privations and length of a voyage by sea.

The Jesuit Vincent Maria, speaking of the Wanderow, says, "the Indians pretend that the other apes and monkies shew particular respect to the Wanderows, because they have more sense than they have. They bow before them, like slaves before a great lord. The princes and the nobles hold them

in great estimation, because they appear to possess a greater degree of gravity and intelligence than the others. They train them for their ceremonies and their games, and they sometimes acquit themselves with so much ability and skill as to excite the greatest mirth and astonishment."

To this account we may add that of Robert Knox, who was detained a prisoner in the island of Ceylon for nearly twenty years. He says that some of the monkies found there are as large as our English spaniel dogs, of a darkish grey colour, and black faces, with great white beards round from ear to ear, which make them look just like old men. They commit very little damage to the cultivated lands, for they always live in the woods on the buds and the leaves of trees, although they may be habituated to other kinds of food. They are of a very violent and ferocious character, when they are ill used. Barbot, in his Voyage to Guinea, and Bosman, designate the Wanderows as little bearded men, about two feet high, as black as jet, with long white beards. The negroes set a great value on the skins of this species, and sell them to one another at eighteen or twenty shillings each. Of the skins of these they make their caps, for the Tie-Ties, or public criers.

The Coaita is a monkey with a long flat face, of a swarthy flesh colour; eyes sunk in the head; ears like the human; limbs of great length, and uncommonly slender; hair long, black, and rough; only four fingers on the hands, being quite destitute of a thumb; five toes on the feet; nails flat; tail long and naked underneath, near the end; body slender, about a foot and a half long; tail nearly two feet in length, and so prehensile as to serve every purpose of a hand.

They inhabit the neighbourhood of Carthagena, Guiana, Brazil, and Peru. They associate in vast herds, and are scarcely ever seen on the ground. Dampier describes their gambols in a lively manner. "There was," says he, "a great company dancing from tree to tree over my head, chattering and making a terrible noise, and a great many grim faces and antic gestures. Some broke down dry sticks, and flung them at me; others scattered their urine and dung about my ears; but one, bigger than the rest, came to a small limb just over my head, and leaping directly at me, made me leap back; but the monkey caught hold of the bough with the tip of her tail, and thus continued swinging to and fro, making mouths at me. The females with their young ones are much troubled to leap after the males, for they have commonly two; one she carries under her arm, the other sits on her back, and clasps its two fore paws about her neck. They are very sullen when taken, and very hard to be got when shot, for they will cling with the tail or feet to a bough, as long as any life remains. When I have shot at one, and broken a leg or arm, I have pitied the poor creature to see it lick and handle the broken limb, and turn it from side to side."

They are the most active of monkies, and quite enliven the forests of America. In order to pass from top to top of lofty trees, whose branches are too distant for a leap, they will form a chain by hanging down linked to each other by their tails, and swinging in that manner till the lowest catches hold of the next tree, and draws up the rest, and sometimes they pass rivers by the same expedient. They are seldom brought to Europe, are very tender, and seldom live long in our climate. There is in the throat of this animal a hollow bony substance, which is supposed to produce that peculiarly dreadful howl for which it is remarkable. They are exceedingly mischievous and spiteful, and, if attacked, they bite cruelly. We are assured by Maregrave that one sometimes mounts the top of a branch, and assembles a multitude below, and then sets up a howl, so loud and horrible, that a person at a distance would imagine that a hundred joined in the cry: after a certain space he gives a signal with his hand, when the whole assembly join in chorus, but on another signal, a sudden silence prevails, and the orator then finishes his harangue. They are extremely sagacious, and, when hunted, defend themselves vigorously.

W. Bourne del.

H. Canton sculp.t

THE BLACK PANTHER

In the Collection of [illegible] Cromwell

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THE BLACK PANTHER.

IN THE COLLECTION OF MR. WOMBWELL.

In a former part of this work (see p. 61), we entered upon a description of the black leopard, an inmate of the same collection as the present sketch, and at p. 87 we described the common panther as it is generally exhibited in the menageries of this country. Having there given in detail the character, general habits, and natural qualities of those animals, it merely remains for us to enlarge upon some further particulars, which our subsequent researches may have acquired, and which may tend to throw additional light on the natural history of this very interesting portion of the animal kingdom.

In regard to the animal now under our immediate consideration, various opinions have been hazarded respecting it; whilst some have affirmed that it is a distinct species, others have adopted a contrary opinion, and have declared that not only the black leopard, but also the black panther, are the immediate offspring of the common species, and that the difference of their colour proceeds from one of those freaks of Nature in which she sometimes indulges throughout the whole extent of the animal tribes. Any attempt to solve the difficulty of this question would carry us far beyond our present limits; we cannot, however, refrain expressing our opinion, that the truth is on the side of the latter hypothesis. We have instances, particularly in the sheep-tribe, of an individual being born almost black, when both the parents are of the usual natural colour; and another very strong circumstance in favour of the black colour of the panther being a *lusus naturæ*, is, that a male and female of the same colour have never been found together, and that in those cases where a black leopard or panther has been discovered, it has been in association with the common kind, and not forming a distinct family, as would be the case were it a separate species. Pennant declares the black panther to be so very rare, that he cannot consider it as a distinct species; and the argument is so far plausible, when he asks, how it should happen that a species of an animal should be so very scarce, which possesses in an equal degree all the power and opportunities for propagating its species with which the individuals of the common kind are endowed. It must also be observed, that the black panther was unknown to the ancients; and when it is considered that the panther was an animal in high request with them, the inference must be drawn, that were the black panther a species distinct of itself, it would undoubtedly have been introduced into some of the grand exhibitions which the ancients were in the habit of making on some of their celebrated feasts. We are informed, that on one of these occasions, Scaurus exhibited one hundred and fifty panthers; Pompey the Great four hundred and ten, and Augustus four hundred and twenty; and yet no mention whatever is made of any of these animals being black. It is probable that the ancients thinned the coasts of Mauritania of these animals; but as the black leopard and black panther are only to be met with in the interior of Africa, it may be adduced as some reason for them not forming any part in the pageants of the Romans, that they had not yet penetrated into the country where that particular species was domesticated. This is, however, a question for future naturalists to solve; but there are difficulties in the way of its solution, which present an almost insuperable obstacle to a decisive result.

In speaking of the panther it may be necessary to remark, that in reading the ancient authors we must not confound the *panther* with the *panthera*. The latter is the animal now under our consideration; whereas the panther of the scholiast of Homer and other authors, is a kind of timid wolf, which

we are inclined to believe is the chacal. Lucian and Pliny were the first who made use of the word *pardus;* and in regard to the name *panthera*, it is a word which the Latins derived from the Greek, but which the Grecians themselves never used.

All the animals of this genus have a muscular body, having their members extremely supple and robust. This numerous species exhibit very slight shades of difference in their organization and their exterior form, but, on the other hand, the difference is very striking in their make and the distribution of the colour of their skin. The cat-tribe are the most vigorous of all the carnivorous mammiferæ, and they are invested with such weapons, that they attack and seize their prey with the greatest facility. The greater species attack the buffalo, rhinoceros, and the elephant, whilst they make their sport of the gazelle, the antelope, the deer, the goat, and other ruminating animals. The lesser species ascend the trees to surprise the birds in their nests, or to seize upon the smaller kinds of mammiferous animals. All have the same manner in hunting their prey, which consists in concealing themselves in ambush, and then springing at once upon their victim when it comes within their reach. They spring with an almost irresistible force, and, by fixing their hold upon the back of their victim, often render unavailable those weapons of defence with which nature may have endowed them. By means of their retractile claws they ascend trees with the greatest facility and celerity; but they are far inferior to the canine genus in the quickness and duration of their flight. It is only the most pressing hunger that can induce them to devour corrupted meat, and for this reason nature has providentially regulated it, that the track of the lion, the leopard, and the panther is generally followed by the hyæna, the vulture, and other creatures of disgusting appetites, who devour the remains of the lion's food, and thus purify the air from those putrescences with which it would be charged were the food to remain long under such a burning climate in a state of exposure to the heat. The panther, like all others of the genus, may be considered more a nocturnal than a diurnal animal, which is evinced by the peculiar construction of its eye, the pupil of which is contracted during the day, and assumes a rotund form in darkness.

Amongst the organs of sense, the most perfect amongst the cat genus is that of hearing. The eyes are also remarkable for their size, their anterior direction and their slight obliquity; for the extent and sensibility of the iris, and the unusual number of nerves which it receives, and finally for the yellow golden colour of the ground of the choroides, all of which are qualities which announce an organ constituted to see in almost profound darkness, and therefore possessing too much sensibility for the light of day.

The organ of taste is not very delicate; in fact, the greater part of its seat or of the tongue has its papillæ covered with rough protuberances like little nails, with forked, sharp, and hard points, which give it the appearance of a kind of rasp.

The whole of the organs of locomotion do not indicate a prompt and rapid pace, because the trunk of the body, which is very elongated, is borne on very short members, especially in the state of flexion in which they generally exhibit themselves. On the other hand, the whole of the skeleton is evidently constructed for the execution of sudden leaps, which are one of the peculiar characteristics of these animals.

The panther is often kept by the great men of the country for the purpose of hunting bucks, goats, and other animals; but great care is necessary in training him, and still greater in conducting him. If he happens to miss his aim, he becomes mad with rage, and sometimes falls on his master, who, to prevent such accidents, generally carries along with him pieces of flesh, or perhaps a lamb or a kid, which he throws to him in order to appease his fury.

THE SEAL.

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THE SEAL.

IN THE ROYAL MENAGERY, TOWER OF LONDON.

THERE exists a very close alliance between the seals and the morse tribe, most of them having the same kind of elongated body and fin-like feet. In their upper jaw, the seals have six parallel and sharp-pointed fore-teeth, the exterior ones of which are the largest, and in the lower jaw, four that are also parallel, distinct, and equal. There is one canine tooth in each jaw, and five grinders above and six below, all of which have three knobs or points. The usual length of these animals is five or six feet. The head is large and round, of a bull-dog appearance; the neck small and short, and on each side of the mouth there are several strong bristles. From the shoulders, the body tapers to the tail. The eyes are large and round, there are no external ears, and the tongue is cleft or forked at the end. The legs are very short, and the hinder ones are placed so far back as to be of little use, except in swimming. The feet are all webbed; the tail is short; the animals vary in colour, their short, thick-set hair being sometimes grey, sometimes brown or blackish, and sometimes even spotted with white and yellow.

The seal is common on most of the rocky shores of Great Britain and Ireland, especially on the northern coasts. In Wales, it frequents the coasts of Anglesea and Carnarvonshire. It preys entirely on fish, and never molests the sea-fowl. It eats its food beneath the surface of the water, and when it is devouring any very oily fish, the place is known by a certain smoothness of the waves immediately above.

The seal is an excellent swimmer and ready diver, and is very bold when in the sea, swimming very carelessly about the boats. Its den, or lodgement, is in hollow rocks or caverns near the sea, but out of the reach of the tide. In the summer it will come out of the water, to bask or sleep in the sun, on the top of large stones or shivers of rocks, and that is the general opportunity which is taken of shooting it. If it chance to escape, it hastens towards its proper element, flinging stones and dirt behind it, as it scrambles along, at the same time expressing its fears by piteous moans: but if it happen to be overtaken, it will make a vigorous defence with its feet and teeth, till it is killed. It is extremely watchful, never sleeping long without moving. At intervals of about a minute or two, it raises its head to see that it is not threatened with danger. Providence seems to have endowed it with this property, because, being destitute of auricles, or external ears, it is consequently unable to hear quickly, or from a great distance.

The females produce two or more young ones at a birth. These, in northern climates, they deposit in cavities of the ice, and the male makes a hole through the ice near them, for a speedy communication with the water. In this they always plunge with their offspring, the moment they observe a hunter approach, and at other times they descend into it spontaneously, in search of food. The manner in which the male seals make these holes is astonishing; neither their teeth nor their paws having any share in the operation: it is performed, according to Mr. Acerbi, solely by their breath. When the females come out of the sea, they bleat like sheep for their young; and though they often pass among hundreds of other young ones before they come to their own, yet they will never allow any of the strangers to suck them. About a fortnight after their birth they are taken out to sea, and instructed

in swimming and seeking their food; when they are fatigued, the parent is said to carry them on her back. According to the report of the seal hunters in Caithness, their growth is so rapid, that in nine tides, about fifty-four hours after their birth, they become as active as their parents.

In their proper depth of water, these animals are very rapid in their motions. They will dive like a shot, and in a few moments afterwards rise at a distance of forty or fifty yards. To the inhabitants of Greenland, the seals are animals of the greatest importance. The sea is to these people what corn-fields are to us, and the seal fishery is their most copious harvest. The flesh supplies them with their principal food, their lamps and fires; and the fibres of the sinews serve better for sewing with than either thread or silk. Of the skins of the entrails this people make their windows, curtains for their tents, and shirts; and part of the bladders they use in fishing, as buoys or floats to their harpoons. Of the bones they formerly made all those instruments and working tools that are now supplied to them by the introduction of iron. Even the blood is not lost, for they boil that with other ingredients, as soup. Of the skins they form clothing, coverings for their beds, houses, and boots, and thongs and straps of every description. To be able to pursue and kill seals is the height of the Greenlander's desire and pride, and to this labour, which is in truth an arduous one, they are trained from their childhood. The hunting of the seal also sets the courage and enterprise of the Finlander in the strongest possible light. The season for the chace begins when the sea breaks up, and the ice floats in shoals upon the surface. Four or five peasants will go out to sea in one small open boat, and will often continue more than a month absent from their families. Thus do they expose themselves to all the horrors of the northern seas, having only a small fire, which they kindle on a kind of brick hearth, and living on the flesh of the seals which they kill; the fat and skins they bring home. The perils with which these voyagers have to struggle are almost incredible: they have incessantly to pass betwixt masses of ice, which threaten to crush their little bark to atoms: they mount the floating shoals, and, creeping along them, steal cautiously upon the animals, and kill them as they repose on the ice.

It is said that the seals delight in thunder storms, and that during those periods they will sit on the rocks, and contemplate, with apparent pleasure and gratification, the convulsion of the elements. The Icelanders entertain, respecting these animals, a strange superstition. They believe them to resemble the human species more than any other creature, and that they are the offspring of Pharaoh and his host, who were converted into seals when they were overwhelmed in the Red Sea.

The voice of a full-grown seal is hoarse, and not unlike the barking of a dog, and that of the young ones resembles in some measure the mewing of a kitten. The flesh of seals formerly found, in our country, a place at the tables of the great, as appears from the bill of fare of a sumptuous feast which Archbishop Nevil gave in the reign of king Edward the Fourth.

The animal from which our drawing is taken has not yet attained its full growth, nor does it appear to be very reconciled to its new abode. If molested in the water, it manifests its indignation by splashing the water with its fore paws, which generally induces the spectator to retire, and its sagacity has perhaps led it to adopt this mode of defence, as the only one within its power. It however shews some degree of docility to its keepers; for, when dragged from its wooden reservoir, and told to return to it, it generally obeys the command, and seems to feel itself happy, when it again finds itself in the watery element.

THE CIVET CAT.

IN THE ROYAL MENAGERY, TOWER OF LONDON.

The animal commonly known by the name of the *Civet*, or *Civet Cat*, is the *Viverra Civetta* of Linnæus; the *felis zibethi* of Gesner; the *civette* of Buffon; and the "ash-coloured weesel, spotted with black, with chestnut-coloured mane, and dusky tail spotted towards the base" of Dr. Shaw. Its general length from nose to tail is somewhat more than two feet, and the tail measures fourteen inches. The ground colour of the body is yellowish ash-grey, marked with large blackish or dusky spots disposed in longitudinal rows on each side, with sometimes a tinge of ferruginous. The hair is coarse, and along the top of the back stands up, forming a kind of mane; the head is of a lengthened or sharpish form, with short rounded ears; the eyes are of a bright sky-blue; the tip of the nose black; the sides of the face, chin, breast, legs and feet are black; the remainder of the face, and part of the sides of the neck, are of a yellowish white; from each ear are three black stripes terminating at the throat and shoulders; the tail is generally black, but sometimes marked with pale or whitish spots on each side of the base. Some naturalists, and particularly Belon, will have the Civet Cat to be the same as the hyæna of the Ancients, and he calls it *hyæna odorifera;* but Buffon observes, that it has nothing in common with the hyæna, except the fissure or sac under the tail, and the mane along the neck and spine. It differs also from the hyæna in the figure and size of the body, being one-half smaller. The ears are short and covered with hair, while those of the hyæna are long and naked. Neither does the Civet Cat dig the earth in quest of dead bodies; and this alone forms a clear distinction between the two animals.

The Civet Cat is a native of several parts of Africa and India, but not of America, as some have erroneously asserted, though it has been transported thither from the Philippine Islands and the coast of Guinea. Although originally a native of the warm climates of Africa and Asia, it is still capable of subsisting in temperate and even in cold countries, provided it be defended from the injuries of the weather, and fed with succulent nourishment.

The Civet Cat is naturally wild, and sometimes rather ferocious, although it may be easily tamed, or at least so far as to be handled without danger. Few animals are more active and nimble than the civet, jumping about, like the cat, in the most animated manner, and running with wonderful speed. It is an animal of prey, pursuing and surprising the smaller animals, and especially the birds, and, like the fox, it will steal into the poultry-yards and commit considerable havoc. Its eyes shine in the night, and it is supposed that, like the cat, it can see in the dark. When it cannot obtain either animals or birds, it takes roots and fruits as its substitute. It drinks very little, and never inhabits moist or swampy places, preferring for its habitation the burning sands or the arid mountains. It is a very prolific animal, bringing forth from three to six at each birth, and breeding regularly once a year.

A considerable number of these animals are kept in Holland for the sake of selling, and procuring the perfume which they yield called *civet*, and which is sometimes erroneously confounded with musk. There is a considerable traffic of civet from Bassora, Calicut, and other places, where the animal that produces it is bred, although the greater part of the civet amongst us is furnished by the Dutch, who rear a considerable number of these animals. That which is obtained from Amsterdam is preferred to

that which comes from the Levant or India, because the latter is generally less pure. That which is brought from Guinea would be the best, if the negroes, as well as the Indians and Levantines did not adulterate it with the juices of plants, or with labdanum, storax, and other balsamic and odoriferous drugs. The perfume is gathered from time to time, and always abounds in proportion as the animal is fed. Before any of these animals were seen in Europe, or it had been observed how the perfume had been gathered, the common opinion, founded on the relation of travellers, was, that it was the sweat of the animal, when irritated and provoked into rage. To produce this effect it was said that the animal was enclosed in an iron cage, and after having been a long time beaten with rods, they gathered with a spoon through the bars of the cage, and between the thighs of the animal, the sweat or foam which the rage or agitation had produced, and that without this precaution the animal would yield no perfume at all: this statement is, however, undoubtedly false. The civet is a secretion formed in a large double glandular receptacle, situated at some little distance beneath the tail, and which the animal empties spontaneously. When the civet cats are kept in a state of confinement, as is usually the case with the perfumers at Amsterdam and other places, they are placed from time to time in strong wooden cages or receptacles, so constructed as to prevent the creature from turning round and biting the person employed in collecting the secreted substance. This operation is said to be generally performed twice a week, and is done by scraping out the civet with a small spatula or spoon. The substance is of a yellowish colour and of the consistence of an unguent, of an extremely strong and even unpleasant odour when fresh, so as sometimes to cause giddiness or headache: the quantity obtained each time amounts to about a drachm. The quantity supplied depends much upon the quality of the nourishment and the appetite of the animal, which always produces more according to the goodness of the food. Boiled flesh, eggs, rice, small animals, birds, young poultry, and especially fishes, are the best kind of food, and they ought to be so varied as to preserve the health and excite the appetite. Very little water is given to it; but although the animal drinks very seldom, he discharges urine frequently, and in this operation the male is not to be distinguished from the female. When the scented substance becomes incommodious to the animal on account of its quantity, or when the reservoirs are too full, it is provided with proper muscles for squeezing it out. The perfume of the animal is so strong that it infects all parts of the body; the hair and the skin are so thoroughly penetrated with the odour, that they retain it long after death, and, during life, it is so violent as to be quite insupportable, especially if a person be shut up in the same apartment with the animal. When heated with rage, the odour becomes more highly exalted, and if the animal be tormented till he sweats, the keeper collects the sweat, which has likewise a strong scent, and serves for adulterating, or at least augmenting the quantity of the perfume. The males yield a greater supply of civet than the females, but the odour of the latter is twice as strong as that of the males.

The civet was formerly used in medicine as highly stimulant and antispasmodic; but is now chiefly confined to the perfumers, the tobacconists, who scent some of their choice snuffs with it, and to the confectioners, who use it as an ingredient in their pastilles and other odorous comfits.

THE LION CUBS

In the Royal Menagery Tower of London

THE LION, LIONESS, AND CUBS.

IN THE ROYAL MENAGERY, TOWER OF LONDON.

In a former part of this work, (see pages 31 and 69) we have described the white or silver lions, and the cubs, which are the offspring of the animals now under our consideration. In the natural arrangement of animals, the lion belongs to the cat genus; and perhaps it may be said, that the most effectual method of guarding against the general prejudice, which takes delight in assigning to the lion the highest rank, at the expense of all other animals, will be found in the incontestable fact, that, both in a physical and moral sense, the lion is nothing more than a cat of extraordinary magnitude, but at the same time invested with unequalled strength, tremendous powers of destruction, and a courage dauntless as it is often ferocious. If we were not in a great degree acquainted with the natural disposition of this stately animal, we should feel a great degree of terror in seeing the keepers of the different menageries play with him as with a dog, and even chastise him when he has given any offence. He seems to bear all this treatment with the utmost good nature, and instances very rarely occur of his revenging these unprovoked and wanton insults. The lion, in a state of captivity, is often bred up with domestic animals, and he has been frequently seen to play innocently and familiarly among them; and if it ever happen that his natural ferocity returns, it is seldom exerted against his benefactors.

It is by the uniformity of his colour that the lion is particularly distinguished from the other animals of the cat genus, it being a pale tawny above, and becoming somewhat lighter beneath, and never partaking of the spots or stripes of the leopard or tiger. In the adult lion, his long and flowing mane is a peculiar characteristic, imparting a majesty and grandeur to the animal which is not to be equalled in any others of his tribe. It originates nearly as far forward as the root of his nose, extending backwards over his shoulders, and descending in graceful undulations on each side of his neck and face. The tuft of long and blackish hair which terminates his long and powerful tail, is also one of his peculiar characteristics, and forms the only dark colour which exhibits itself in the whole animal. The lioness differs from the lion in the want of the mane, and in the more slender proportions of her body.

We are indebted to Mr. Bennett, one of the most active members of the Zoological Society, for some very interesting particulars respecting the "old lion" of the Tower, who, although he is known by that name, is in reality little more than six years old. His proper name, or rather that by which he has been known ever since his arrival at the Tower, is George. The following anecdotes respecting the mode of his capture, and his habits and demeanour in his captivity, are given on the authority of Mr. Cope, who derived his information on the first point from General Watson himself; and in regard to the latter, he speaks from his own personal observation.

It was in the commencement of the year 1823, when the General was on service in Bengal, that, being out one morning on horseback, armed with a double-barrelled rifle, he was suddenly surprised by a large male lion, which bounded out upon him from the thick jungle at the distance of only a few yards. He instantly fired, and the shot taking complete effect, the animal fell dead almost at his feet. No sooner was this formidable foe thus disposed of, than a second, equally terrible, made her appearance, in the person of a lioness, whom the General also shot at, and wounded so dangerously that she retreated into the thicket. As her following so immediately on the footsteps of her mate

afforded strong grounds for suspecting that her den could not be far distant, he determined upon pursuing the adventure to the end, and traced her to her retreat, where he completed the work of her destruction, by again discharging the contents of one of the barrels of his rifle, which he had reloaded for the purpose. In the den were found a beautiful pair of cubs, male and female, supposed then to be not more than three days old. These the General brought away with him, and succeeded, by the assistance of a goat, who was prevailed upon to act in the capacity of a foster-mother to the royal pair, in rearing them until they attained sufficient age and strength to enable them to bear a voyage to England. On their arrival in this country, in September, 1823, he presented them to his Majesty, who commanded them to be placed in the Tower. The male animal is the subject of the present article.

"The extreme youth of these lions," says Mr. Bennett, "at the time of their capture, and the constant control to which they had been accustomed from the earliest period of their existence, rendered them peculiarly tame and docile, insomuch that, for twelve months after their arrival, they were frequently suffered to walk in the open yard among the visitors, who caressed them and played with them with impunity. The Duke of Sussex, in particular, was highly delighted with the unusual spectacle of a lion and a lioness bounding about him at perfect liberty, and with all their natural grace and agility. It must, however, be observed, that they were not then fully grown, and that it was afterwards thought necessary to place them under greater restraint, but more with the view of guarding against possible mischief, than in consequence of any positive symptoms of rebellion. Both the animals retained their usual docility, until the lioness gave birth to the cubs, when a total alteration took place in her temper and demeanour. She no longer suffered the least familiarity, even on the part of her keepers, but gave full scope to the violence of her passions."

The Asiatic lion, of which we are now treating, seldom attains the size of the full-grown African lion; but a greater degree of uniformity exists in its colour, and the mane is more full and complete, commencing beneath the neck and occupying the whole of the middle line of the body below. It must, however, be remarked that all these distinctions are modified by age, and vary in different individuals.

It cannot be doubted that the lighter and slenderer shape of the lioness has a direct tendency to the formation of that more lively and sensitive character by which the generality of her motions is distinguished. Her inferiority in muscular strength to the lion is in a great degree compensated by the greater liveliness of her disposition, the unrestrained ardour of her passions, and the vigorous impetuosity of her motions; but it must be further remarked that the two animals differ in a very striking characteristic, which is the position and direction of their heads, that of the lion being always elevated and thrown upwards with an air of majesty and grandeur, whilst the lioness carries her head on a level with the line of her back, imparting to her a sullen and downcast look; and this singular distinction appears to be in a great measure dependent on the absence of the mane, for it has been observed that the young male cubs, until the period at which this badge of dignity begins to make its appearance, carry their heads in the same level position with the female.

THE DOG-FACED BABOON

In the Royal Menagerie

London Published by Thomas Kelly [illegible]

THE DOG-FACED BABOON.

IN THE ROYAL MENAGERY, TOWER OF LONDON.

This species of baboon is of a bright colour, composed of a mixture of grey and brown, the hair appearing as if speckled. It is a very large animal, at least equal, if not superior, to the common brown baboon and the mormon, its average height being between four and five feet. It is remarkable for a vast quantity of flowing hair on each side of the head, as well as round the shoulders, spreading in such a manner as to give the appearance of a short cloak or mantle. The whole face is naked and of a flesh colour, more or less deep in different individuals. The eyes are deeply seated and of a chestnut colour. The bare spaces on each side of the tail are very large, protuberant, and of a very bright flesh colour, or rather red. The tail is almost the length of the body, and is commonly a little tufted at the end. The nails on the hands, or fore feet, are flat; those on the hind feet resemble claws. This is a rare species, in comparison with the common baboon, and is a native of the hottest parts of Africa and Asia. There is a wonderful degree of sagacity in the countenance of the animal, and a kind of solemn contemplative disposition seems to be strongly indicated in its looks, when calm and undisturbed; but when irritated, the most striking efforts of vindictive violence are immediately exhibited. It is also possessed of an uncommon degree of obstinate moroseness, surpassing most others of its tribe; and is, when in a state of confinement, of a disposition so rude and unquiet, and of manners so peculiarly indecorous, as generally to frustrate all attempts to civilize and reclaim it.

The dog-faced baboons usually associate in vast companies. When travellers pass their haunts, they run into the nearest trees, and shake the boughs with great vehemence, at the same time chattering very loudly. They are so powerful as with little difficulty to overcome a man, and they frequently commit such depredations in cultivated grounds, that the proprietors are compelled to have armed men continually on the watch, to prevent them from plundering. Amongst the mountains near the Cape of Good Hope, there are immense troops of these baboons, or of a kind called Ursine Baboons, which are very nearly allied to them. When these animals discover any single person resting and regaling himself in the fields, they, if possible, approach behind and snatch away whatever they can lay hold of; then, running to a little distance, they will turn round, seat themselves on their posteriors, and, with the most arch grimaces imaginable, will devour it before the man's face. They frequently hold it out in their paws, as if to offer it back again; and use such ridiculous gestures, that although the poor fellow loses his dinner, he seldom can refrain from laughing.

These baboons are indeed so numerous amongst the mountains, as at times to render it exceedingly dangerous for travellers to pass them. They sit undismayed on the tops of the rocks, and sometimes roll or throw from them stones of immense size. A gun, in these cases, is generally of indispensable use, in driving them to such a distance that the stones they throw may do no material injury. In their flight, even with their cubs upon their backs, they often make most astonishing leaps up perpendicular rocks, and their agility is so great as to render it very difficult even to kill them with fire-arms. When any person approaches their haunts, these animals set up a universal and horrible cry for a minute or two, and then conceal themselves in their fastnesses, and keep a profound silence: they seldom descend to the plains, except for the purpose of plundering the gardens that lie near the foot of the mountains. While they are engaged in this operation, they are careful to place sentinels for the purpose of pre-

venting a surprise. They break the fruit in pieces, and cram it into their cheek pouches, in order afterwards to eat it at leisure. The sentinel, if he sees a man, gives a loud yell, and the whole troop retreat with the utmost expedition, and in a most diverting manner, the young ones jumping on and clinging to the backs of their parents.

In confinement these baboons may be rendered docile, yet they always retain the disposition to revenge an injury. At the Cape they are often caught when young and brought up with milk; and Kolben informs us that they will become as watchful over their master's property as the most valuable house-dog in Europe. Many of the Hottentots believe they can speak, but that they avoid doing so lest they should be enslaved and compelled to work. Though not naturally carnivorous, they will eat either meat or fish that is cooked. They are generally kept chained to a pole, and their agility in climbing, leaping, and dodging any one that offers to strike them, is almost incredible. The same traveller reports, that, although one of the animals was then tied up, it was impossible, at the distance of a few yards, to hit him with a stone; he would either catch it like a ball in his paw, or he would avoid its blow with the most astonishing agility.

The animal now in the Tower is a most complete adept in thieving, and during the voyage, he was allowed to run at large about the ship, but scarcely a day elapsed without Jacko exhibiting some specimen of his skill in thieving. The cook's department was his most favourite place of resort, and he succeeded one day in purloining two fowls, which were just ready for the spit. Suspicion attached to the whole crew, and a most rigorous search was instituted, but for some time without effect, until it was at last discovered that Jacko had concealed his ill-gotten treasure in the rigging. Not content, however, with being simply the thief, he began to tear the fowls into pieces, and, seated on one of the yard-arms, to pelt the crew below with the pieces. A general chase was now set on foot to catch the thief, but his agility was so great that his pursuers found it necessary, at last, to leave Jacko to the enjoyment of his liberty.

During his present confinement in the Tower, he has once succeeded in extracting a gentleman's watch from his pocket, but Jacko could not understand the use of it—the tick-tick appeared completely to puzzle him—he dropped the watch—picked it up again, put it to his nose, smelt it; but still the tick-tick seemed to confound him—at last he put it to his ear, and appeared highly delighted with the sound. The watch was restored to the owner with no other damage than the breakage of the glass.

The late Dr. Darwin had a baboon of this kind, who by his mischievous propensities was a continual source of annoyance to the whole household. It was the custom of the Doctor to have the Matlock water brought to his house in a large hogshead, and the animal used to watch the arrival of the hogshead with an anxiety as great as a bon-vivant would the arrival of a pipe of port—but the hogshead was not long stationed in the yard, when the animal would draw out the spigot, and jump about with joy to see the water running out. The following, however, may be adduced as a proof of how far the *reason* of these animals extends. The Doctor had one day a fine haunch of venison at the fire, when the monkey mounted to the top of the house, and collecting a heap of stones and brickbats, threw them down the chimney, completely destroying the joint at the fire. The Doctor, being apprised of this new specimen of his monkey's mischief, was so enraged, that he determined to shoot him, and taking his gun, proceeded to the yard from which he could obtain a good aim at the delinquent, but the monkey no sooner saw the gun, than he stripped off one of the tiles, and holding it before him completely protected himself from the shot. If the Doctor moved—the monkey moved his tile also—squinting every now and then from behind it, to see the situation of his enemy. The Doctor at last laid down his gun, exclaiming—"What could the reason of man do more?"

THE CONDOR.

THE CONDOR.

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The Condor is the largest of the feathered tribe which has the faculty of flying. The mountains of Peru are its general residence, although it is to be found in other parts both of the old and new continents. It has hitherto been classed by naturalists amongst the vultures, although in many of its habits it differs considerably from those disgusting birds. Like them, however, it inhabits desert and inaccessible places, and mountains of the highest altitude, from which it descends but rarely into the plains; but, unlike the vulture, it never deigns to feed on carrion, but always on animals, which have been caught by it in the chase. The condor possesses, even in a higher degree than the eagle, all the qualities, all the endowments which Nature has bestowed on the most perfect species of this class of beings. It has an extent of wing from twelve to fourteen feet; the bill is strong, moderately hooked, and blunt at the tip, which is white; the rest of it is of a dusky colour. The male bird has a kind of gular pouch, or large dilated skin of a bluish colour, proceeding from the base of the lower mandible, and reaching to some distance down the neck. On each side of the neck is also situated a row or series of flat carneous, semicircular, or earshaped flaps or appendages, to the number of seven on each side, and which gradually decrease in size as they descend, being so disposed as to lop slightly over each other. The whole neck and breast are of a reddish-brown colour, and in some parts are nearly bare, being only coated here and there with a few straggling filaments of blackish hair or coarse down. The colour of the lateral wattles or caruncule inclines to blue. The crest or comb on the head is large, upright, thick at the base, sharpened on its edge, and not entirely even in its outline, but somewhat sinuated, sinking slightly in the middle, and rising higher on the back part; it is smooth and irregularly convex on the sides, and in its texture or substance not greatly dissimilar to the Vulture Papa of Linnæus, or king vulture. At a slight distance behind this, on each side, is situated a much smaller semioval nuchal crest, of a similar substance, and beset with coarse down. The colour of the crest is blackish, slightly inclining to red and blue in some parts. Towards the lower part of the neck is a pendant pear-shaped tubercle; the lower part of the neck is surrounded by a collar of milk-white down or fine plumes, representing exactly a tippet of white fur. The upper parts of the body, wing, and garl are black, except that the middle wing-coverts have whitish ends, and the greater coverts half black, half white. The nine or ten first quills are black, the rest white, with the tips only black; and when the wings are closed, producing the appearance of the bird having the back white. This circumstance has misled many naturalists in their description of this bird, who have been thence induced to describe it as having the back white, whereas it was only the white secondaries which covered the back from the view. Gmelin copied this error from Molina, and thus Mr. Latham was misled. The under parts of the body are rather slightly covered with feathers, but those of the thighs are pretty long. The legs are short and brown; the claws black and blunt.

The condor builds its nest in the highest mountains, under the shelter of some projecting shelf of a rock, in which the female lays two white eggs, rather larger than those of a turkey.

Father Teuillée, speaking of the condor, says, "It is a bird of prey which haunts the valley of Zlo, in Peru. I discovered one that was perched upon a great rock; I approached it within musket shot,

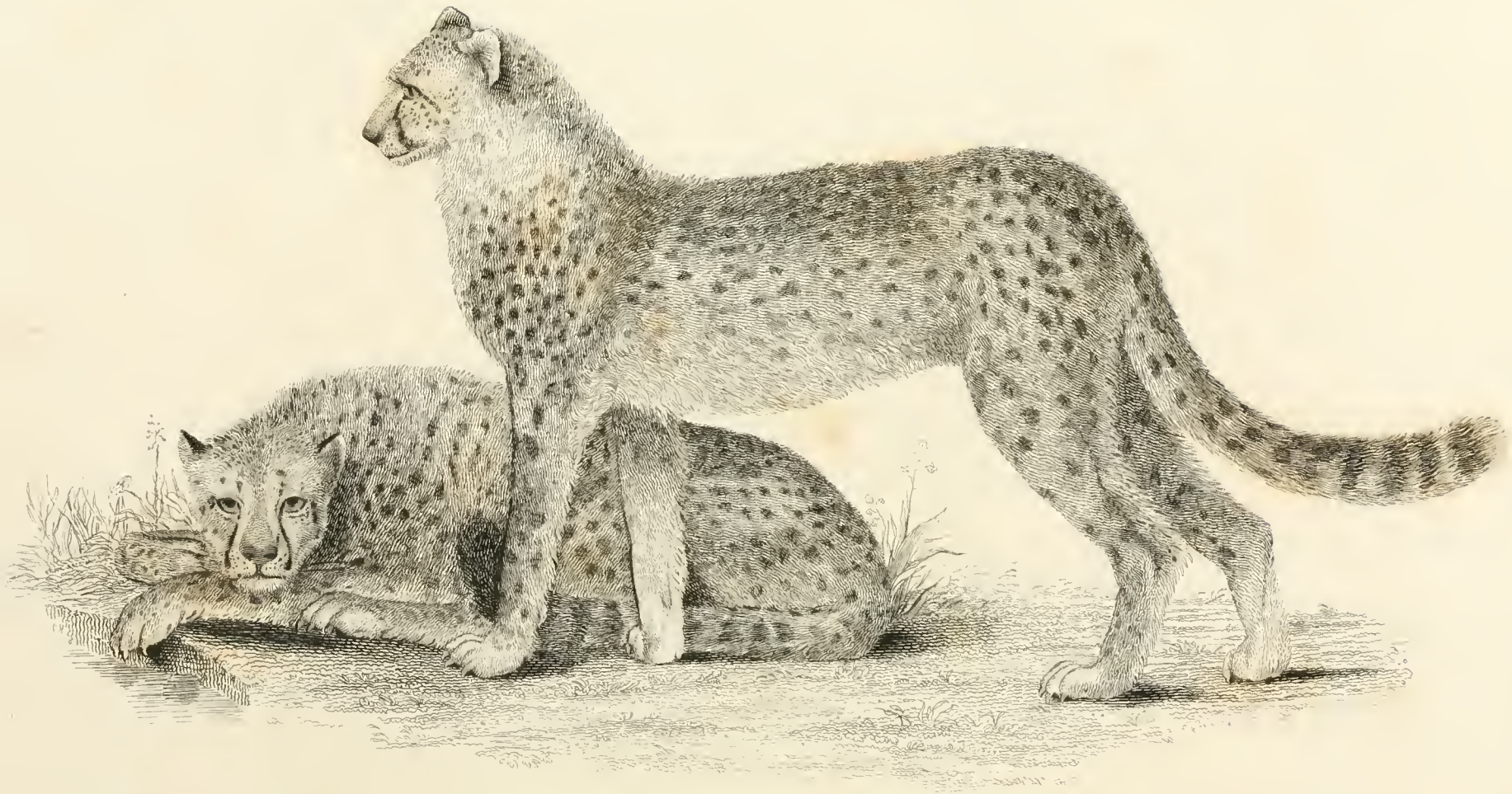
and fired; but as my piece was only loaded with swan shot, the lead could not pierce its feathers. I perceived, however, from its motions, that it was wounded, for it rose heavily, and could with difficulty reach another great rock, five hundred paces distant, upon the sea-shore. I therefore charged my piece with a bullet, and hit the bird under the throat. I then saw that I had succeeded, and I ran to secure the victim, but it struggled obstinately with death, and, resting upon its back with extended talons, I was at a loss on what side to lay hold of it; and I believe, that if it had not been mortally wounded, I should have found great difficulty in securing it.

"These birds commonly settle upon the mountains, where they procure their subsistence: they resort to the shore only in the rainy seasons, and, feeling the approach of cold, they seek shelter and warmth in the plains. The scanty subsistence which these birds can pick up on the margin of the sea, except when storms cast ashore large fish, obliges them to make but a short stay: they appear on the beach generally about evening, and there pass the night, and return to their usual haunts in the morning."

According to Acosta and Garcilasso, there are some condors whose wings extend fifteen or sixteen feet; their beak is so firm, that they pierce a cow's hide, and two of them are able to kill the animal and eat the carcass. Sometimes they dare even to attack men, but fortunately the instance is rare; and if these birds were very numerous, they would soon extirpate the cattle. The American Indians affirm that the condor will seize and transport a hind, or a young cow, with the same ease as it would do a rabbit; that their flesh is coriaceous, and smells like carrion; that they seldom frequent the forests, where they have scarcely room to wield their enormous wings; but that they haunt the sea-shore, the sides of rivers, and the savannahs, or natural meadows.

Nothing can exceed the sagacity with which the condor perceives the scent of its prey at a distance, or the boldness with which it flies down to seize it. When it alights upon the ground, or rises from it, the noise which it makes with its wings is such as to terrify and almost to deafen any one who happens to be near the place. A method of taking condors alive is often practised in Peru and Quito, and is as follows:—A cow or horse is killed, and in a little time the scent of the carcass attracts the condors, which are suddenly seen in numbers in places where no one supposed they existed. They always begin with the eyes and tongue, and then proceed to devour the intestines, &c. When they are well sated, they are too heavy and indolent to fly, and the Indians then take them easily with nooses. When thus taken alive, the condor is dull and timid for the first hour, and then becomes extremely ferocious. Mr. Humboldt had one in his possession for some days, which it was dangerous to approach. In Chili, the peasants use the following stratagem for the caption of these birds. One of them wraps himself up in the hide of a fresh-killed sheep or ox, and lies still on the ground: the condor, supposing it to be lawful prey, flies down to secure it, when the person concealed lays hold of the legs of the bird, his hands being well covered with gloves; and immediately his comrades, who are concealed at a distance, run in and assist to secure the depredator, by falling on him with sticks till they have killed him.

The bird from which our drawing is taken must not be considered as having attained its full growth, nor does its appearance betray any of those tremendous powers with which Nature has so lavishly endowed it.



THE CHITTAHS OR HUNTING LEOPARDS.

In the Gardens of the Zoological Society

H. Smith del.

W. [illegible]

London Published by Thomas Kelly, Paternoster Row June 1 1830

THE CHITTAHS, OR HUNTING LEOPARDS.

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

UNTIL the present time the generic characters of the cats have afforded us but one important modification, which consisted in the form of the pupil, always circular with some, and contracted with others, in proportion as the light was more vivid. The animal which is the subject of the present sketch presents a new modification, and becomes thereby the type of a new secondary group; its nails are neither retractile, nor are they made to tear their prey in pieces, like those of some others of the cat tribe, of which, however, it possesses the essential characters, the same system of dentition, the senses, and the general forms of the head. Its nails resemble those of a dog, and being destitute either of offensive or defensive organs, this animal possesses a disposition very different from that of the majority of the cat tribe, who find, in their sharp and lacerating nails, weapons more cruel and dangerous than their teeth.

We are informed by the writings of Tavernier, of Chardin, and of Bernier, that in many parts of Asia, a species of spotted cat is used for the chase, called youze in Persia, and chittah in the Indies, but nothing further is known of the organization of this singular species, with this exception, that a sufficient number of its characteristics have been collected to distinguish it completely from all the other species of cats, at the same time that it is necessary to obtain a knowledge of it from other points, in order to solve the problem which it presents of a cat employed in the chase, that is, trained to an exercise, which requires the greatest degree of constraint, and the most profound modifications in its natural dispositions, whilst, on the other hand, all the other species, and even the domestic cat, preserve a complete independence and untractableness.

In the organization of this animal a considerable difference exists between it and the majority of the cat species. It is, in the first place, diurnal, the pupil of the eye remains always round, and never assumes that contracted form which that of the domestic cat exhibits, when exposed to the full light of the day. Its head also differs from that of the cat in the middle part of it being much higher; and its general proportions, which are much lighter and more active, may also be given as one of its most distinguishing characteristics.

The length of its body from the top of the head to the base of the tail is three feet two inches; its head, from the crown to the tip of the nose, eight inches, and its mean height is two feet one inch. All the upper parts of its body are covered with small round spots, on a pale fulvous-yellow ground. On the lower parts, these spots appear on a whitish ground. The fore part of the upper lips, the whole of the lower jaw, the lower sides of the cheeks, and the insides of the ears, are quite white. All the other parts are completely yellow, and the hair over the whole of the body is short. From the internal angle of the eye proceeds a black line which assumes the form of an S, and which terminates at the corners of the mouth. On the sides of the cheeks is a group of very small spots, and a few other spots are scattered over the white part of the cheeks, and on the head the small spots begin at the top of the forehead. On the neck the hair is longer than on any other part and very much frizzled. Behind the ears there is a black spot very close to the head. The spots on the neck are small and by

no means close to each other, particularly on the sides; they begin to increase in size on the shoulders and the foremost members, and they preserve nearly the same proportion over the whole of the remainder of the body, but they decrease in number on the flanks and thighs. The breast and the belly, which are white, are wholly destitute of spots. The tail is yellowish above and whitish underneath, and the spots are disposed irregularly at its base. These spots, however, towards the middle of the tail, run almost into each other, and form incomplete rings, and at the end of the tail these rings become separate and distinct. The extremity of the tail is white.

The possession of a large spotted cat, with a disposition naturally mild and gentle, the immediate consequence of its organization, presents a wide field for the professed zoologist, as it presents considerable difficulty in its classification. The chittah is in reality not a cat, according to the fullest meaning of the term. Its nails are not sharp, which are the very weapons on which all the real species of cats rely with the greatest confidence, and which they make use of either offensively or defensively in preference to all others; and the greater the influence which they have upon their character, the more intimate is their relation with the instinct of their preservation. This exposition is so much the better founded as it enables us without much difficulty to establish the intimate relations between the youze and the chittah, which it must be admitted belongs incontestably to the same species as that of Buffon. The chittahs are natives of Senegal, and they bear a perfect resemblance to the skins which are known in commerce under that name, and from which alone Buffon established his species. The specific identity of the youze and the chittah is equally well founded and incontestable. The descriptions and figures of the youze, which have been given by Schreber, under the Latin cognomen of *Felis jubata*, and by Pennant, under *Cat hunting;* the details which are to be found in the Asiatic Register relative to the hunting leopards of Tippoo Saib, but more especially, the figure, the notes, and the skins of the chittah which have been transmitted to Europe by M. Alfred Duvancel, set at rest all doubt respecting the identity of the two animals. It may, therefore, be considered that the chittah is to be found both in Asia and Africa, but that it is only in the former country that it is employed in the chase, whilst in the latter, the good qualities of its character and its capacity are not properly appreciated, and that it is only sought after for the value of its skin.

Barrow, in his first Travels in Africa, speaks of the chittah when he is describing the animal which the Dutch farmers in the vicinity of the Cape call a leopard; the "farmers," he says, "give the name of leopard to another animal of the same family, (of the family of the tigers of the mountains and the tigers of the plains,) but it is not so long, although it is thicker, greater, and stronger than those which I have just mentioned. Its colour is cinereous, with small black spots; the neck and the temples are covered with long frizzled hair, similar to that of the mane of a lion. The tail is two feet long, and is spotted half its length from the base, the remainder is annulated. Its face is marked with a broad black line, which extends from the internal corner to the extremity of the throat. We captured a young one, which soon became familiar with us, and played about us like a cat."

M. Cuvier mentions an animal of this species now in Paris, which is completely tamed, exhibits all the playful antics of our common domestic cat, and, when caressed, purrs in the same manner as the cat; but subsequent examinations have proved that it is not the animal now known by the name of Chittah, and, therefore, forms a distinct species of itself.

THE BRAHMIN BULL.

THE BRAHMIN BULL, OR INDIAN OX.

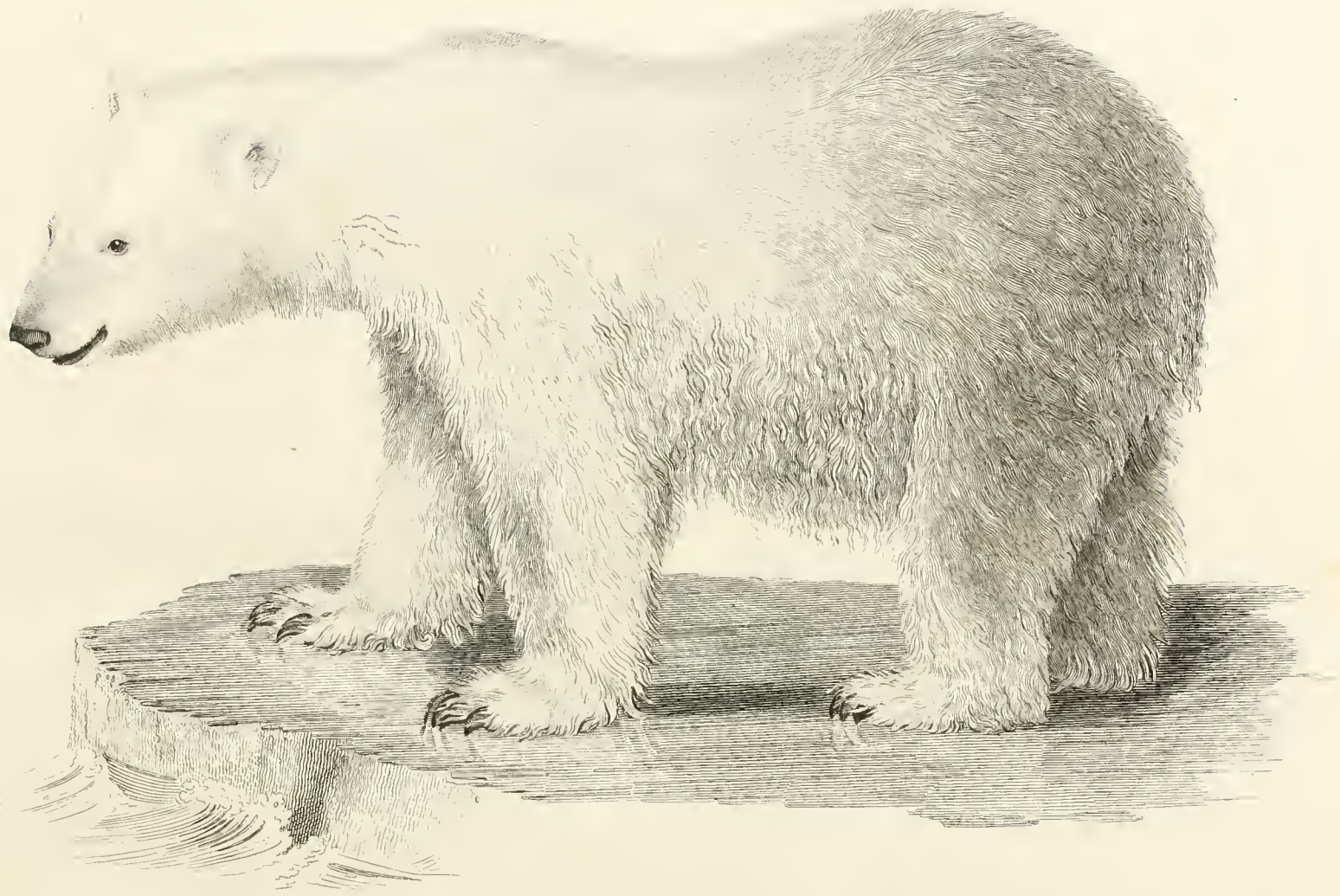
IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

THIS animal, although by no means rare in the country in which it is indigenous, may, nevertheless, be considered as one of the greatest ornaments of the place in which it is now confined. In size it is equal, if not superior, to that of our domestic oxen, and, with the exception of some particular characteristics which are the distinguishing marks of its species, it bears a very great resemblance in its form and habits to the ox of this country. The Indian ox may be strictly said to belong to the race of the bisons, having the hump on the back peculiar to those animals, but the great difference between them consists in the length of the hair, and the peculiar form of the head. The neck, the shoulders, and the lower part of the throat of the bison are covered with long wiry hair, whereas those parts of the Indian ox are merely covered with the same kind of short hair as the other parts of the body, nor is there even on the head that curled and frizzly hair which distinguishes the head of our common bull. It is stated by M. de la Nux, that the bisons, or humpbacked oxen of India and of Africa, will breed with the bulls and cows of Europe, and that the hump is merely an accidental characteristic, which diminishes after the first generation, and wholly disappears after the second or third. The Indian ox differs from the European merely by accidental varieties, and, according to Buffon, he traces all the domestic oxen without humps to the aurochs, and all the humpbacked oxen to the bison. That eminent naturalist says, that it is the hump, the length and quality of the hair, and the form of the horns, which are the only characteristics by which the bison is to be distinguished from the aurochs; but in order to bring these animals to the same origin, it is necessary to remark that the length and quality of the hair in all animals depend on the nature of the climate, and that in oxen, goat, and sheep, the shape of the horns is by no means determinate, therefore it cannot be affirmed that these differences are sufficient to establish the existence of two distinct species. It is, however, worthy of remark that the two species appear to be the inhabitants of opposite climates. The oxen without humps occupy the cold and temperate zones; on the other hand, the bisons, or humpbacked oxen, inhabit all the southern provinces, the entire continent of the Indies, the islands of the southern oriental seas, the entire of Africa from Mont Atlas to the Cape of Good Hope; and it appears also that those species which inhabit the hot countries are characterized by the shortness of their hair, and, as beasts of burthen or of draught, the humpbacked species possess many advantages over the common oxen. The oxen of Surat, which belong to the species now under our consideration, are all white, of an extraordinary size, and some of them have two humps. They are trained when young, and are taught not only to trot but to gallop in harness, which is, in general, of the most costly kind. One of these animals, decked out for some of the religious ceremonies of the Brahmins, presents a most gaudy appearance. It is covered with wreaths of flowers, and bells are hung round its neck; its body is enveloped in the richest silks, and it is followed by crowds of fanatics, who eagerly collect the dung which falls from it, and which is preserved by these people as an invaluable treasure, and as a charm against many of the maladies to which they are liable. In the travels of John Ovington, he says, speaking of the Indian oxen, "The carriages of Mogul, which are a species of coach on two wheels, are all drawn by oxen, which, although naturally heavy and slow

in their gait, acquire, by long use and exercise, such a great facility of drawing these carriages, that there are few animals which can go at so rapid a rate." The majority of these oxen are very large, and between the shoulders they have a great piece of flesh rising to the height of about six or eight inches.

In the country of Camandu, in Persia, the species of oxen are entirely white, with small horns on their head, which, however, are not sharp at the point, and their hump is so large that great and heavy burthens may be placed on it. When the natives load the animals, they bend their knees to receive the load, like the camels, and rise at a given word of command. In Bengal they are trained in the same manner; the drivers of them never use a whip, but when they are sluggish or stubborn they merely twist the tail of the animal, and they are so trained as to quicken their pace immediately without any other kind of coercion. The regard which the natives of India have for these animals is in some places so great, that it has degenerated into the most abject superstition. They consider that, as the ox is the most useful of animals, it is the more deserving of their reverence, and they have not only made it the object of their veneration, but they have converted it into an idol, or a kind of benevolent and powerful divinity. The dung of these animals forms also one of the most precious unguents of the fair sex in India. Peyrard, in his Voyage to India, relates, "that the queen was surrounded by the ladies of her court, and that the floor on which she had to tread, and the walls and passages through which she had to pass, were all strewed with cows' dung." A free admission is given to the animals to enter the palace of the king, and to roam at large through every apartment; and whenever the king or any of his nobles meet one of them, they make way for it with all the respect and reverence due to a sacred object. A greater degree of veneration is paid to the cow than to either the bull or the ox.

The humpbacked oxen differ perhaps more than ours in the colour of their skin and the figure of their horns. The colour of the subject of the present article is a grey, inclining to slate, intermixed with hairs that are wholly white; the under part of the belly, the dewlap, and the lower part of the legs are white. There is, however, a species which are wholly white, and which are held in higher estimation than those of any other colour, and it would appear that the bisons, or humpbacked oxen, ought to be divided into two secondary races, the one very large and the other very small, in the latter of which may be included the zebu. They are found under the same climate, and all possess equally the same tractable and gentle disposition. The aspect of our present subject is mild and gentle in the extreme; nor in its general habits does it betray any tendency to ferocity. It has been generally believed that the hump on its back proceeded from the conformation of the spine and the bones of the shoulders, but this has been found to be an error; it is nothing more than a fleshy excrescence, a kind of tumour, and equally as good to eat as the tongue. Some of these humps have been known to weigh forty or fifty pounds, and in the south of Africa they are prized as a particular dainty. Another striking characteristic of this animal is its slouching ears, which are completely pendent, and the general conformation of its head fully entitles it to be considered as a species distinct from the common bison, or our domestic ox.



THE WHITE POLAR BEAR.

In the Gardens of the Zoological Society.

Smith, del. W. Lanorn

London, Published by Thomas Kelly, Paternoster Row, June 1 1821

THE WHITE POLAR BEAR.

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

It is not long since the naturalists have refrained from confounding the white polar bear with the white land bear, whereas a very essential difference exists in their characteristics, and particularly in their natural habits. In regard to the former, it differs in having the neck and head of a more lengthened form, and the body longer in proportion to its bulk; the nose is also larger, the nostrils more open, and destitute of whiskers; the ears are much shorter, and the hair longer and not so coarse. The proportions of the feet exhibit also some striking differences; the hinder feet of the polar bear are equal in length to a sixth of the length of the body, whereas those of the common brown bear are equal only to a tenth. The whole animal is white, with the exception of the tip of the nose and the claws, which are jet black; the ears are small and rounded; the eyes small; the teeth of extraordinary magnitude. The hair is of great length, of a woolly texture, and in some of the species, especially those which are very old, the colour inclines to yellow. Its lips and the interior of its mouth are of a violet blue.

This animal seems confined to the very coldest parts of the globe, being found within eighty degrees of north latitude, almost as far as any navigators have yet penetrated. The shores of Hudson's Bay, Greenland, and Spitzbergen, are its principal places of residence, but it is said to have been accidentally carried as far south as Newfoundland.

The immense number of them which are to be found in the polar regions is truly astonishing. They are not only seen on the land, but often on ice-floats several leagues at sea. They are sometimes transported in this manner to the very shores of Iceland, where they no sooner land, than all the natives are in arms to receive them.

The polar bears are animals of tremendous ferocity. Barentz, in his voyage in search of a north-east passage to China, had the most horrid proofs of their ferocity in the island of Nova Zembla; they attacked his seamen, seizing them in their mouths, carrying them off with the utmost ease, and devouring them even in the sight of their comrades. This ferocious disposition is supposed to be regulated by the mildness or severity of the winter, and although they are animals which can endure a longer fast than any others, yet, when they are much pressed with hunger, their attack is of the most indiscriminate nature, and their voracity is truly astonishing. Their usual food consists of seals, fish, and the carcasses of whales, but when on land, they prey on deer and other animals. They likewise eat various kinds of berries which they happen to find. They are frequently seen in Greenland in great droves, allured by the scent of the flesh of seals, and will sometimes surround the habitations of the natives and attempt to break in; and it is affirmed that the most successful method of repelling them is by the smell of burnt feathers. During the summer they reside chiefly on the ice-islands, and pass frequently from one to another, being in swimming extremely expert. They have been seen on these ice-islands at the distance of more than eighty miles from land, preying and feeding as they float along. They lodge in dens, formed in the vast masses of ice, which are piled in a stupendous manner leaving great caverns beneath. It is generally in the month of March, after a period of six or seven months of gestation, that they bring forth their young, one or two at a time, and sometimes,

but very rarely, three. They follow their dams a very long time, and grow to a large size before they quit them. During winter they retire, and bed themselves beneath the snow, or else beneath the fixed ice of some eminence, where they pass, in a state of torpidity, the long and dismal arctic winter, appearing only with the return of the sun.

The flesh of the polar bear is eatable, and is said to have some resemblance to the taste of mutton, but the fat of it partakes strongly of a fishy odour. Its skin is valued for coverings of various kinds, and, according to Billing, a skin generally sells for a ruble. The liver is considered by the Siberians as a remedy for venereal diseases and inflammation of the throat; but, according to the report of some Dutch sailors, who lived for some time in the countries inhabited by these animals, and who ate of the liver, the effects produced were of the most disagreeable and painful kind.

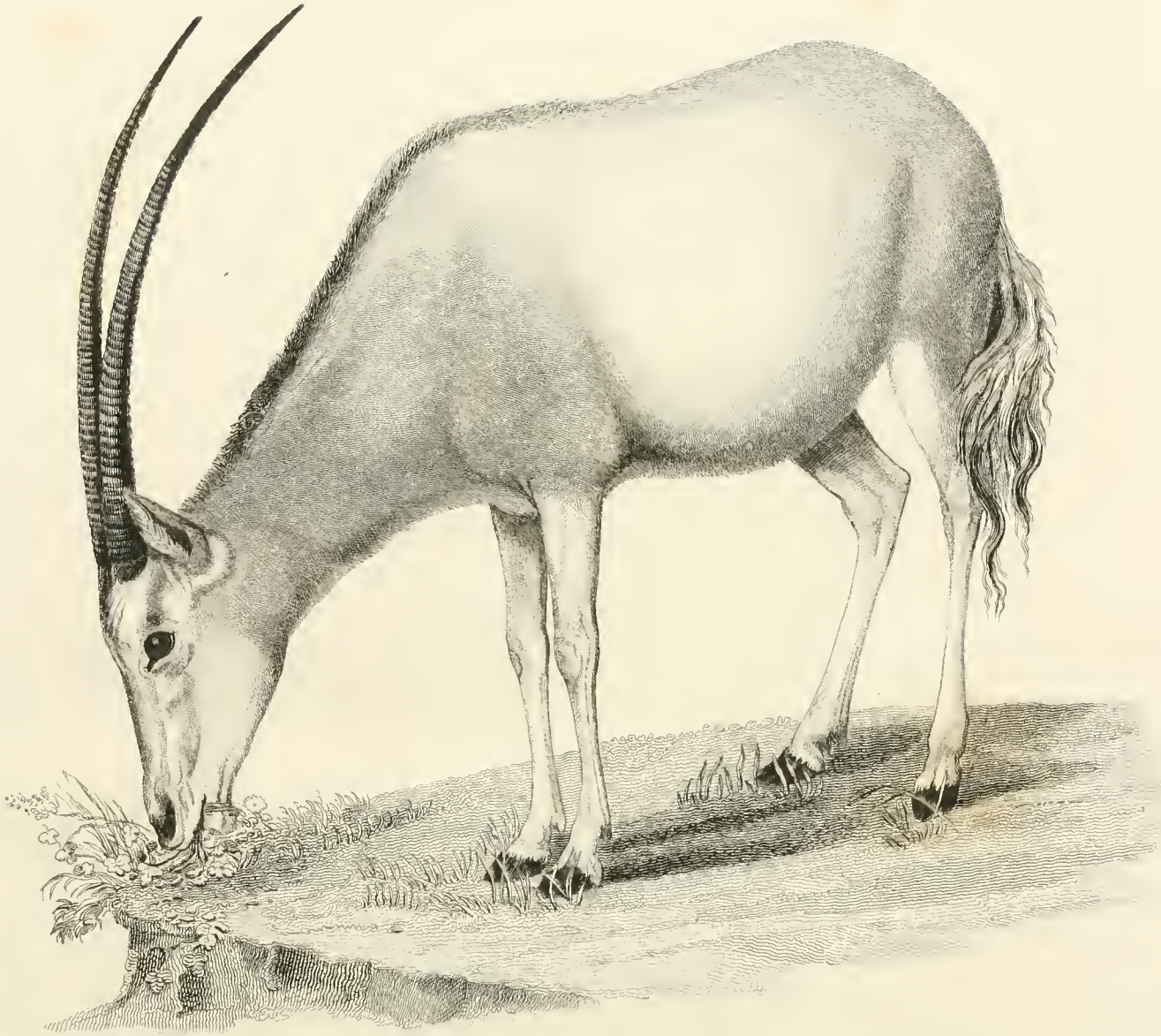
One of the most peculiar characteristics of this animal is the almost continual motion of the head and neck, moving them up and down, and then sideways, and appearing on the whole less reconciled to its confinement than any other animal in the Gardens. It is, however, so far tamed as to accept of food from the hands of the visitors, and, having greedily devoured it, it resumes immediately its restless motion.

The following anecdote of the sagacity of these animals, in searching for prey, is extracted from the works of the Honourable Robert Boyle. "An old sea-captain told me that the white bears in or about Greenland, notwithstanding the coldness of the climate, have an excellent nose, and that sometimes when the fishermen had dismissed the carcass of a whale, and left it floating on the waves, three or four leagues from the shore, from which it could not be seen, these animals would stand as near the water as they could, and, raising themselves on their hind legs, would loudly snuff in the air, and with two paws of their fore-legs drive it, as it were, against their snouts, and when they were satisfied whence the odour came, would cast themselves into the sea and swim directly towards the whale."

The polar bear has a great dread of heat. An animal of this species, described by Professor Pallas, would not stay in its house in the winter, although it was at Krasnojarsk, in Siberia, where the climate is very cold, and it seemed to experience great pleasure in rolling itself in the snow. We believe the subject of the present sketch to be a very recent importation into this country, and, therefore, it is impossible to say in what manner it will bear the heat of our summer, but the animal that was kept in the Museum of Natural History at Paris suffered excessively during the hot weather. The keepers, throughout the year, were obliged to throw upon it sixty or seventy pails of water a day to refresh it. This animal was fed only with bread, of which it daily consumed no more than about six pounds, notwithstanding which it became very fat. Above one hundred pounds of fat have been taken from one of these animals.

White bears are sometimes found in Iceland, but not being natives of that island they are supposed to float thither from the opposite coast of Greenland, on some of the huge masses of ice that are detached from those shores. After so long an abstinence as they must necessarily undergo on the voyage, they are reduced by hunger to attack even men if they should come in their way. But we are informed by Mr. Horrebow that the natives are always able to escape their fury, if they can only throw in their way something wherewith to amuse them. A glove, he says, is sufficient for this purpose, for the bear will not stir till he has turned every finger of it inside out, and as these animals are not very dexterous with their paws, this takes up some time, and in the mean time the person makes his escape.

Since writing the above, we have paid another visit to the Gardens, and we observe that a pond has been made for the bear, in which he recreates himself at pleasure, and which affords him ample protection from the summer heat.



THE ANTELOPE LYCOUREUX.

In the Collection of Mr. Cross Royal Mew

Panorme sculp.t

THE ANTELOPE LEUCORYX.

IN THE MENAGERY OF Mr. CROSS, ROYAL MEWS.

The antelope forms an intermediate genus between the deer and the goat. In the form of their bodies they agree with the former; and in the texture of their horns, which have a core in them, they resemble the goats. Some of the species are in their form far less elegant and light than the rest: of this, the leucoryx, or white antelope, seems the most remarkable instance, the body being thick and heavy, and the head very large. In the disposition of colours on the face, there is a remarkable approach to those of the Pasan or Egyptian antelope; but the colour of the body is of a snowy whiteness, with the exception of the middle of the face, the sides of the cheeks, and limbs, which are tinged with red. The nose is thick and broad, like that of a cow; the ears somewhat slouching; the limbs are slight, in proportion to the heaviness of the body. The horns are very long, very slightly incurvated, slender, and annulated about half way upwards; their colour is black, and they are sharp pointed: the hoofs are black, and the tail somewhat flocky, or terminated by loose hairs. The size of the animal is about the size of a Welsh Runt, and it is the inhabitant of an island called Gow Bahrein, in the Gulf of Bassora.

Some of the numerous species of this genus are found in America; they are mostly confined to Asia and Africa, inhabiting the hottest regions of the Old World, or the temperate zones near the tropics. None of them, except the chamois and saiga, are found in Europe. They chiefly inhabit hilly countries, though some reside in the plains; and some of the species form herds of two or three thousand, while others keep in small troops of five or six. They have all gall bladders; distinct lachrymal gutters, or pits under the eyes. In general their flesh is excellent, as they feed on the tender roots of trees; though some species have a rank hircine or musky flavour, which probably results from the qualities of the plants on which they feed.

The animal is considered by the African as a very dangerous one, the form and sharpness of its horns rendering it a very formidable adversary; and, like others of this genus, when it makes its attack, it bends down the head, and rushes forward with great violence, thus presenting the points of its sharp and long horns immediately forwards. The Africans, when they have wounded it, are said to be careful of approaching it till they are well assured that it is totally deprived of life.

This animal is very rare in the menageries of this country, and we are informed that this is the second only which has ever been publicly exhibited. In its place of confinement it exhibits not the slightest indication of ferocity, but appears to possess the general timidity of its species.

In Asia, the antelope leucoryxes have been kept by the different shahs of Persia, as great rarities, in their parks, particularly by Shah Sultahn Houssein, Emperor of Persia, in his park at Cassar, about eight leagues from the capital; and it was from these animals that the first drawing of them reached England, and which is now preserved in the British Museum.

THE ZEBUS.

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

Some naturalists, and particularly Blumenbach, have held the opinion that the zebu does not derive its origin from the same stock as our common domestic ox; but a rigorous examination of the skeleton of the two animals has proved to M. Cuvier that no essential difference exists between them, and thence he is convinced that they belong to the same species. The zebu itself presents many varieties: some are tall in size, others are very dimunitive; some have horns, and others are wholly destitute of them, similar to our poll breed of oxen. The majority of the species have only one hump, but some of them have two. These different species are scattered through Asia, from Persia to the Moluccas, and from Arabia to China; and over the whole surface of Africa, from Senegal to the Cape of Good Hope.

The zebu is the same animal which is called the Lant or Dant in Numidia, and in several other northern regions in Africa, where it is very common; and we have considered it necessary to make particular mention of this circumstance, in order to prevent our readers from confounding it with the American dant, which, in reality, is nothing more than the tapir or the maipouri. The African dant or zebu is so swift, that no animal, unless it be the Barbary horse, can overtake it. They are said to be more easily taken in summer, because, by the force of running, their hoofs are worn among the burning sands; and the pain occasioned by this circumstance makes them step short, like the stags and fallow deer of those deserts.

As might be naturally expected, the zebu is subject to as great a variety of colours as those which affect the European race. Its most common hue is a light ashy grey, passing into a cream colour, or milk white; but it is not unfrequently marked with various shades of red or brown, and occasionally it becomes perfectly black. Although originally a native of very warm regions, it is capable of existing and multiplying in temperate climates. "I saw," says Mr. Collison, in a letter to M. de Buffon, "a great number of these animals in the Duke of Richmond's, and also in the Duke of Portland's parks, where they every year bring forth calves which are extremely beautiful."

In Surat there is a kind of zebu not larger than a great dog, which has a furious look, and is used to draw children in small carts.

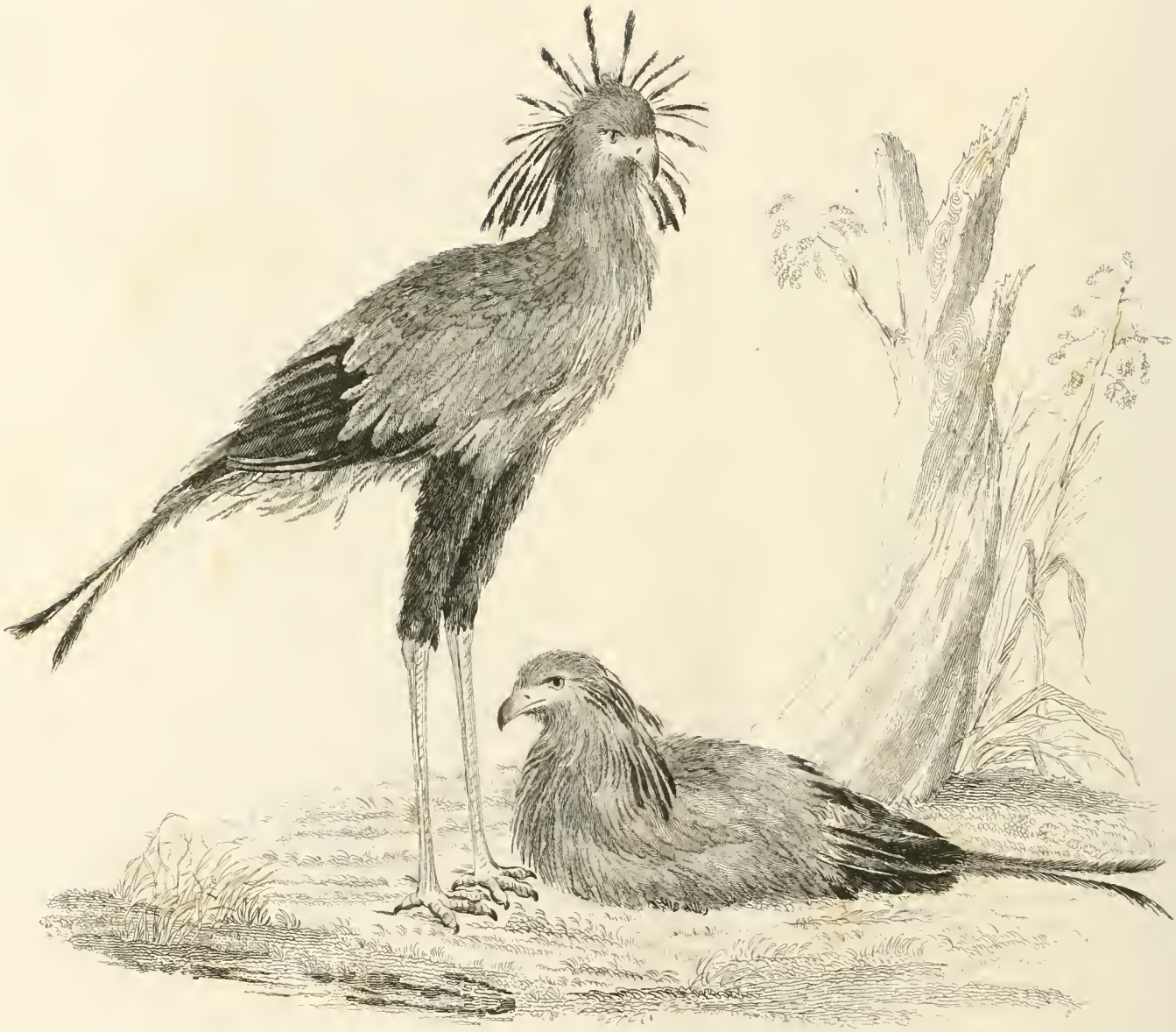
Of this race the Society has at present numerous specimens, which vary considerably in their colours, the shape and extent of their horns, the size of their hump, and other equally unimportant particulars. But the same general forms, and the same quiet mildness of disposition, are observable in all the individuals which have come under our notice, including several specimens of a still smaller race, which scarcely exceed two feet in height, and measure little more than three feet in total length.

The whole of the breeds are treated with great veneration by the Hindoos, who hold it sinful to deprive them of life under any pretext whatever; but they do not in general scruple to make the animals labour for their benefit, although they consider it the height of impiety to eat of their flesh.

THE ZEBUS.

H. Smith. del.

In the Gardens of the Zoological Society



THE SECRETARY.

IN THE COLLECTION OF Mr. CROSS, ROYAL MEWS.

The bird which is known to the French ornithologists under the appellation of the Sagittaire, or *Falco Serpentarius*, has, from the singularity of its conformation, been the source of considerable difficulty in regard to the class to which it ought to be referred. M. Temminck classed it in the gallinaceous order, whilst M. Vieillot arranged it amongst the waders, on account of its similarity to that order, from the peculiar length and make of its legs. It is, however, now considered to possess the greatest affinity with the vultures, as it agrees with them in the most essential particulars of its organization, though differing in its external characters.

Mr. Bennett, speaking of the generic characters of this singular bird, thus describes it: "They consist in the form of the beak, which is shorter than the head, thick, and curved nearly from the very base, where it is covered with a cere; in the long and unequal feathers which take their origin from the back of his head, and are susceptible of elevation and depression; in the naked skin which surrounds his eye, and which is shaded by a series of hairs in the form of an eyebrow; in the great length and slenderness of his tarsi, which forms his most striking characteristic in an order remarkable for a structure exactly the reverse, and in the shortness of his toes, which are terminated by blunted talons of little comparative size and curvature. The only known species measures upwards of three feet in length." Its plumage, when in a perfect state, which is far from being the case with the subject from which our drawing is taken, is for the most part of a bluish grey, with a shade of reddish-brown on the wings, the large quill feathers of which are black. The throat and breast are nearly white, and the rest of the under surface of the body presents a mixture of red, black, and white, the plumage of the legs being of a bright black, intermingled with scarcely perceptible brownish rays. The plumes of the crest which ornament the back of the head, and from the supposed resemblance of which to the pens frequently stuck behind the ears of clerks and other writers, the name of secretary was given to the bird, are destitute of barbs at the base, but spread out as they advance, and are coloured with a mixture of black and grey. Each of the wings is armed with three rounded bony projections, with which, as well as with his feet, the bird attacks and destroys his prey.

Although the secretary in his habits resembles the eagle and the vulture, yet in the nature of its prey it is wholly different, preferring live flesh to carrion, and his chief food consisting of snakes and reptiles, for the caption and destruction of which its oganization is peculiarly adapted. It runs with amazing swiftness, and trusts more to its legs than to its wings for its escape from the pursuit of the hunter. It is a native of the south of Africa, and is tolerably numerous in the vicinity of the Cape, where it has been rendered so tame as to be an inmate of the poultry-yards, where it is kept for the purpose of killing the snakes and rats, which are apt to intrude into their precincts.

THE THIBET BEAR.

IN THE GARDENS OF THE ZOOLOGICAL SOCIETY.

The natural history of this animal seems to have escaped the notice of our most eminent zoologists, which in some degree may be ascribed to the rarity of its appearance in the established or the itinerant menageries. We cannot find any notice of it before the commencement of the present century, when it was confounded with the small American bear, which was presented by the Hudson's Bay Company to Sir Hans Sloane, in the year 1737. The Thibet bear may be enumerated amongst the smallest of the ursus genus, the legs being short and thick, and the claws projecting similar to the larger Russian bear; its colour also resembles the latter animal, being of a darkish-black, with scarcely any intermixture of a lighter shade, with the exception of the under part of the belly and neck. This bear, like others of its species, has six front teeth in each jaw. The two lateral ones of the lower jaw are longer than the rest, and lobed with smaller or secondary teeth at their internal bases. There are five or six grinders on each side, and the canine teeth are solitary. The tongue is smooth, and the snout prominent. The eyes are furnished with a nictitating or winking membrane.

In its general habits the Thibet bear differs very little from any other of the species, but in its dispositions it appears more sullen and ferocious; in its size it may be said to take the intermediate rank between the labiated bear and the Malay bear of Raffles, and was originally discovered in the Silhet district, by M. Alfred Devaucel. Its distinctive characters consist in the straight line of its forehead, and the bushy hair of its neck. It differs, however, essentially from the other species of bear, in the texture of its hair, which in general exhibits not the usual shagginess of the common bear, but is smooth, and it is this very circumstance which renders its skin of less value in the European markets than that of either the American or the Norwegian bear. The under lip of this animal approaches nearly to a white, and it has a mark on the breast in the form of a Y, the two branches of which appear on the front of the shoulders, and the foot or pedestal between the legs, extending to the middle of the belly. The snout has a slight reddish tint; the cartilage of the nostrils has a great resemblance to that of the bear of the Alps.

The general physiognomy of the bear indicates a lazy and idle habit, but the history of its general dispositions is so imperfectly known, that no just estimate can be given of its precise habits. It often lies rolled up for a considerable time like the sloth bear, described in this work, page 73, and it appears unwilling and angry at being roused from its dormant state.

It may be proper to remark that this bear forms one of the three species of the bears of Southern Asia. The first, being the labiated bear, of Bengal; the second, the Malayan bear, of Raffles; and the third, the Thibet bear (ursus Tibetanus). The first may be considered as the most remarkable of its species; the second, as the most diminutive of the whole genus; and the latter, as being the link between them both in size and diversity of colour.

THE THIBET BEAR,

In the Gardens of the Zoological Society

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